AUSTRALIA'S #1 PC GAMING MAG

PC PowerPlay

SINCE 1996

WARHAMMER 40,000:

CHAOS GATE

DAEMONHUNTER IS XCOM-LIKE STRATEGY MEETS WARHAMMER

EXPERT REVIEW

STEAM DECK

CAN IT RUN THE BIGGEST GAMES? COULD IT REPLACE YOUR PC?

EXCLUSIVE

PC's NEW GOLDEN AGE

GET READY FOR AN EXPLOSIVE ERA OF HARDWARE & GAMES

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DUNE: SPICE WARS

WE'LL BE DUNE SOME SPICE MINING

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PC PowerPlay

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THE EMPEROR

Praise be!

This issue we're taking a preview look at... a new Warhammer 40,000 game! I know, right? I mean, they're so *rare* these days... Not.

I'm actually kinda curious about this one myself. I'm bit of a 40K fan (I've just started a new Craftworld army!), and I played a bit of the previous Chaos Gate back in the day.

It was a pretty challenging game, but the most challenging part? Quitting. Yep, every time you'd finish a mission and want a break, you'd hit Quit, and – like many games maddeningly do – it asked you if you really, truly wanted to quit. Only, it did so by asking you this simple question:

Betray the Emperor? Yes/No?

Yes, to quit out of the game you had to betray the saviour of humanity. For a big Warhammer nerd like me (my first army was Ultramarines, dammit!), that really hurt.

I hope it's still in the new game.

David Hollingworth

"... a new Warhammer 40,000 game! I know, right? I mean, they're so rare these days..."

WELCOME

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WARHAMMER 40K: CHAOS GATE – DAEMONHUNTERS

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XCOM vibes, but with cosmic plagues and almost no RNG

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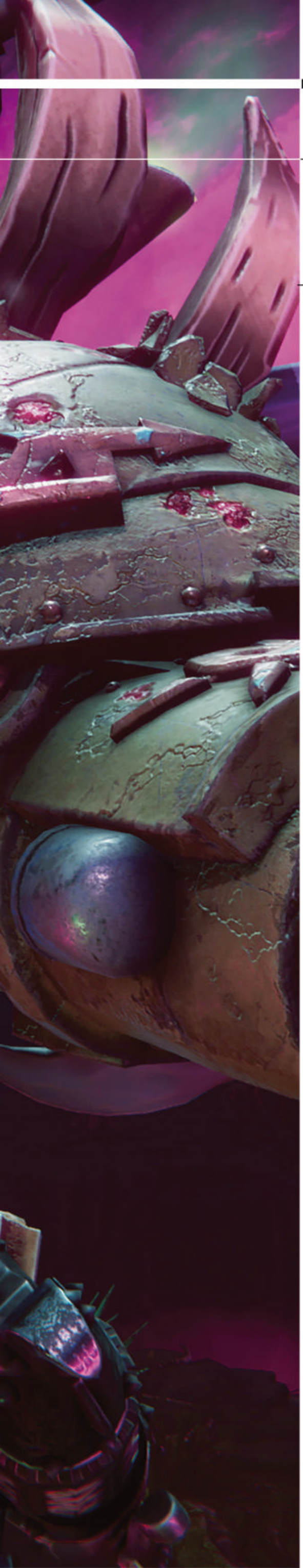

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Cyberpunk 2077 mod adds vehicle combat and intense police chases

The bevvy of futuristic vehicles in Cyberpunk 2077 are mostly just there to help you get from place to place. Sure, they look plenty cool, but... meh. The Vehicle Combat mod by Scissors over on NexusMods looks to address that. The mod's primary feature, as its title suggests, is allowing players to aim and fire weapons while driving Cyberpunk 2077's rigs.

Star Trek Online ships now canon after Picard Season 2 reveal

Thomas Marrone and Hector Ortiz, Star Trek Online's Associate Art Director and Senior Concept Artist respectively, collaborated with the production team behind Picard to design the USS Stargazer, which is a Sagan-class vessel fitted with Borg technology, as confirmed by Cryptic. If that doesn't get you excited for Season 2, I don't know what will.

RIMWORLD HAS BEEN REMOVED FROM STEAM IN AUSTRALIA

Well, shit.

While space colony sim RimWorld has been available digitally in Australia since 2013, it was recently put in front of the Australian Classification Board due to a potential physical console release. The Board gave RimWorld a rating of "Refused Classification", making it illegal to sell in Australia, due to the way it deals with "matters of sex, drug misuse or addiction, crime, cruelty, violence or revolting or abhorrent phenomena in such a way that they offend against the standards of morality, decency and propriety generally accepted by reasonable adults".

At the time we assumed this probably wouldn't affect the PC version. So did RimWorld's developers, Ludeon Studios, who wrote in a news post, "We did not expect this to affect the Steam version because in previous similar cases, as with Disco Elysium for example, an RC rating on a console version did not affect the availability of the PC version on Steam."

Turns out we were wrong, and RimWorld has vanished from sale on Steam in Australia. While previously purchased copies remain in their owner's libraries, its Steam page is inaccessible in the region.

Activision Blizzard and Epic join the list of publishers halting sales in Russia

Following the likes of Microsoft, Electronic Arts, and CD Projekt.

In response to Russia's invasion of Ukraine, Activision Blizzard president and COO Daniel Alegre has announced the company "will be suspending new sales of and in our games in Russia while this conflict continues." In a message addressed to his team, Alegre wrote, "The company is matching employee donations 2:1 to organisations providing immediate relief in the region. Together we have raised over US$300,000 in this effort. Next week we plan to add additional charities to choose from for consideration and also will raise the company matching limit from US$1,000 to US$10,000."

Epic Games has also announced, via the Epic Games Newsroom on Twitter, that it is "stopping commerce with Russia in our games in response to its invasion of Ukraine." It goes on to confirm that, though sales will end, Russians will still be able to play its games. "We're not blocking access for the same reason other communication tools remain online: the free world should keep all lines of dialogue open."

Epic and Activision Blizzard join companies including Microsoft, Electronic Arts, and CD Projekt in halting sales to Russia.

AMD RYZEN 5000 SERIES CPUS SEE HUGE PRICE CUTS

These spread across several retailers so these are hopefully permanent price changes.

Rejoice, PC builders! The AMD Ryzen 5000 series of desktop CPUs are seeing massive price cuts. Given these span several retailers and a wide range of chips, this is likely a permanent price drop, rather than a one off sale, which is even better news for everyone's wallets.

Spotted by WCCFTech, AMD's Ryzen CPUs have dropped in price at Microcenter, Newegg, Amazon, and BestBuy. Prices have gone down by a significant amount too, between US$60 and US$170 chip depending. So far this seems to be true for the United States and the UK, so hopefully we'll see this discount spread further across the globe with a little time, and hopefully even trickle down to us here in Australia.

So far Amazon and BestBuy appear to have some of the best deals for the highest end chips. The top-of-the-line Ryzen 9 5950X is going for US$600 or around £530 GBP, which is at least 25% off its previous MSRP. These are a great all round performance chip, with excellent power efficiency. In fact, one of our main complaints is that these were a bit pricy for what you're getting. At this new price point they're a banger of a deal, putting it slightly cheaper than Intel's comparable i9 12900k, which has fewer cores and threads.

But the same could be said for the somewhat cheaper Ryzen 9 5900X. Now priced at US$450 at all of the mentioned retailers, this is a seriously good deal for our favourite AMD gaming chip. Again, our main complaint against this chip at launch was the price. Otherwise it's a great performance CPU with more threads than you'd ever want. At US$450, it's an easy one to recommend for people looking to build a great new powerful and somewhat budget conscious PC.

The truly budget conscious are looked after here too. CPUs like the Ryzen 7 5800X were sitting at around US$450 but are now as cheap as US$300 at Microcenter. Others have them closer to US$350 which we still think is a pretty good deal.

You can get even cheaper again if you're willing to drop to a Ryzen 5 5600X, which both Microcenter and BestBuy currently have for US$230. This is far cheaper than we've ever seen these units, and we've had them earmarked as a pretty good deal for a while now. The Ryzen 5 5600X is listed as one of our favourite affordable CPUs for gaming, and given these price drops the case for that is only stronger now.

Again, due to the breadth of retailers displaying the discounts, it's very likely this price drop comes from AMD. This means we're likely to see it spread to other retailers, and hopefully other regions fairly quickly. If there's supply to match the prices, it seems like a lot of nifty AMD powered rigs are about to join new households.

MONEY FOR NOTHING

Microsoft is about to learn that some things simply can't be bought, no matter how much money you have to burn...

James Cottee is planning a hostile takeover of... checks notes... Future Publishing?! That doesn't sound right...

The Microsoft takeover of Activision Blizzard – a gaming buyout on an unprecedented scale. A deal worth almost 70 billion US dollars, or around 100 billion Dollarydoos. The world of gaming is still reeling from the shock.

What does this all mean? How will it affect our lives? Will Bill Gates ruin gaming the same way he ruined television, by always appearing in grotesque gut-hugging pink jumpers? The answer is: don't panic. This isn't the end of gaming. This simply marks the end of Activision Blizzard as a cultural force.

Consider the recent Disney buyouts of Marvel and Lucasfilm. At the time, this seemed like a big deal. The characters Disney bought are household names, forming pop-culture pantheons built up over half a century of creative output. But when the Mouse cut his cheques, they were cultural properties in sharp decline.

American comic books have been dropping off steadily since at least the early 1970s. The occasional emergence of an Alan Moore or a Grant Morrison has not altered this trajectory. Comic sales have been in freefall for years – the hit manga Demon Slayer now outsells all American comics put together!

Likewise, since the very first sequel arrived in 1980, all Star Wars content has been little more than fan fiction. When the Disney Star Wars movies entered mass production their execrable nature so confused fans that some of them broke completely from reality. Many otherwise well-adjusted and sane people convinced themselves that Episode VIII wasn't actually a bad movie, you just need to watch it four or five times for the true genius of it to sink in.

Attendance at the 'Galaxy's Edge' Star Wars theme parks is well below initial projections. The toys just don't sell anymore. A dozen or so Star Wars TV shows are in development for Disney+, and no-one cares. Ours is an attention economy, and Disney spent billions on IPs that people can't even be bothered pirating. Disney Star Wars movies somehow achieved the impossible: they made the prequels look good!

Has Microsoft followed in the Mouse's footsteps and bought a multi-billion-dollar lemon? Let us consider the franchises Mr. Satya Nadella now has at his fingertips.

There's World of Warcraft, of course, the subscription-based online game full of sexy goblins in gigantic shoulder-pads. WoW has been haemorrhaging players for years; Blizzard stopped publicising their subscriber count some time ago. The recent announcement that Horde and Alliance players could go questing together was undoubtedly necessitated by the dwindling player pool.

For the record, I'd like to stress that we're not haters here at PC PowerPlay. If you like games filled with muscular goblin ladies, then more power to you. It's just that Blizzard's offerings no longer represent the state of the art in this department – the 'boomer shooter' Hedon is currently the market leader in greenskin cheesecake.

Back on topic: the last Call of Duty was a joke, Overwatch is as dead as a doornail, Diablo Immortal is an embarrassment, and Candy Crush isn't so much a game as a digital barbiturate. Activision Blizzard still makes headlines, but for all the wrong reasons – like employees allegedly having their breast milk stolen from the company fridge.

Activision Blizzard CEO Bobby Kotick will personally earn around four hundred million dollars from the buyout deal, more than any human being could ever need, unless he wants to run for office. Would he be any worse than the current resident of the White House? Perhaps President Kotick could avert future wars not by invading countries, but by simply buying them...

To the low-information gamer, Microsoft acquiring Activision Blizzard might seem like a hundred billion dollars well spent. But this isn't the Activision that David Crane founded to champion the rights of game designers. This isn't the Blizzard that made The Lost Vikings and Warcraft III. The well-informed gamer – the sophisticated reader of PCPP – knows that today's Activision Blizzard is just an IP lich; a skeleton of dead brands held together by dark magic and spite.

The two stand-out games of 2021 were Highfleet and Cruelty Squad, each crafted by a lone, eccentric, dedicated designer driven by an uncompromising vision. And they're not alone: making everything from Doom .wads to wireframe flight sims, there is a new wave of lone game devs doing something that the big end of town has forgotten how to do: capture the imagination.

The death of Activision Blizzard will mark the rebirth of gaming – just you wait!

“Technology enables progress by helping us do things in our normal lives that once seemed impossible.”
Chris Hadfield. Astronaut, Engineer and Pilot

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GAMING'S LINEAGES EXPL

THE GETAWAY IS THAT RARE GAME ENHANCED BY ITS PRODUCT PLACEMENT

THE LONG GOODBYE

How TEAM BONDI built LA Noire on the back of The Getaway.

Look at the paper map of London folded into the front of *The Getaway*'s DVD box, and you'll be struck by two things. First, just how incredibly faithful it is. And second, the uneven street density. Where most of the city is a condensed network of main roads that take you round the back of Buckhingham Palace and across Hyde Park, that changes as you cruise through Covent Garden into Soho – the game world becoming a close crosshatch of squares and side streets. It's the natural focus of a team that lived and worked in the area – Team Soho, as they were then. The same core staff that would end up founding Team Bondi, and making *LA Noire*.

The Getaway has a lot in common with the game Team Soho's key members would go on to create. For one thing, it took a long time to come together – first conceptualised during the PS1 era, and releasing just after *Vice City*. Unusually for the time, it shone a spotlight on its non-celebrity actors – using photo images of the cast in promotion, recreating their faces and performances in cutscenes, and putting their names front and centre of its credit sequence.

Although it took place in an open city, *The Getaway* didn't adopt the free-roaming structure that *GTA* was just then popularising. Instead, its London was the backdrop to a bleak riff on Guy Ritchie's cockney capers – the linear story of a helpless tough "running all over town" committing bucket-list crimes on behalf of the ageing gang boss who had kidnapped his child.

RHYMING GANG

Once the player arrived at the scene of their next shootout, Team Soho would whip out the magnifying glass, drawing interiors in intense detail. Witness the Reptilian Gallery, home to an art exhibit filled with dozens of unique paintings and sculptures, not to mention information boards, leaflet stands and a receptionist who asks the protagonist if she can be of any assistance ("Nah I don't fink you can babe. I'm just browsin', awight?").

It might be thought of as unnecessary set dressing for a mission that quickly descends into clunky cover shooting, and concludes with a car chase at breakneck speed. But you can't argue with the sense of place and authenticity that results from it. *The Getaway* is that rare game enhanced by its product placement; where *Grand Theft Auto* leaned into parody, this competitor offered the uncanny realness of passing a Pizza Hut in a Lexus – the car brands fitting for a studio that first found its wheels with the PS1's *Porsche Challenge*.

After critical acclaim and commercial success, the core Getaway team followed writer-director Brendan McNamara to Sydney, where they set up Team Bondi – initially with the continued backing of Sony. Swapping out Snatch for LA Confidential, they envisioned another open world city, this time taking in Hollywood and the backyard of the Black Dahlia killer. Again, the blocks and blocks of meticulously remembered urban land were purely peripheral, left out of focus in favour of the main event: small-scale crime scenes which players would investigate, turning over discarded coffee cups with their hands, rummaging through handbags and bins in search of clues. Again, the team sought to rival cinema, investing in cutting-edge performance capture tech – asking players to analyse the expressions of actors in close-up, in order to determine whether suspects were telling the truth.

HEAVY PRICE

It remains an irresistible premise, but it was a costly one. In fact, *LA Noire* became the most expensive game project in Australian history. Before long, Sony backed out – and in a twist of irony, Team Bondi found a partner in Rockstar, which picked up the financial baton and carried it through to the bitter end.

BELOW: Look past the hostage situation to the exit sign. Delicious attention to detail.

GET OUT

The lengths put into capturing London

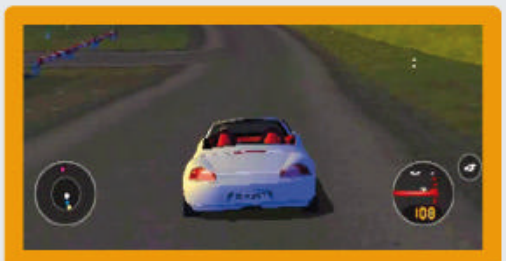
1 The team took over 500,000 images of the bustling capital to work from.

2 One artist was banned from planning offices for looking at too much reference material.

3 A photoshoot around Soho led to a real-life chase as bouncers pursued the art team.

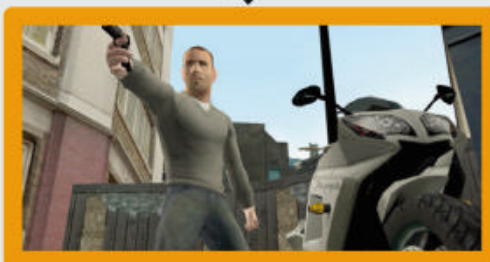
A LIFE OF CRIME

Team Bondi's road to success and scandal



PORSCHE CHALLENGE
PlayStation racer with mo-capped drivers.

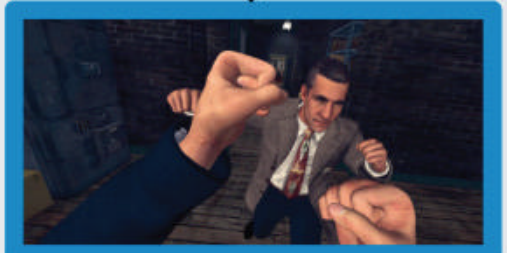
THE GETAWAY
Meticulously rendered London simulator.



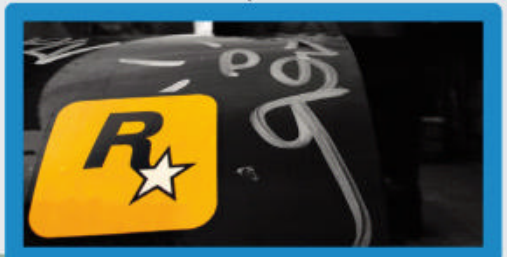
THE GETAWAY: BLACK MONDAY
Started as an expansion pack. Feels like one.

LA NOIRE
Lavish detective game embedded in a *GTA*-style city.

WHORE OF THE ORIENT
Cancelled 1930s Shanghai story.



LA NOIRE: THE VR CASE FILES
One of the best VR games on PC.



'AAA OPEN WORLD VR GAME'
Mystery project with Rockstar.

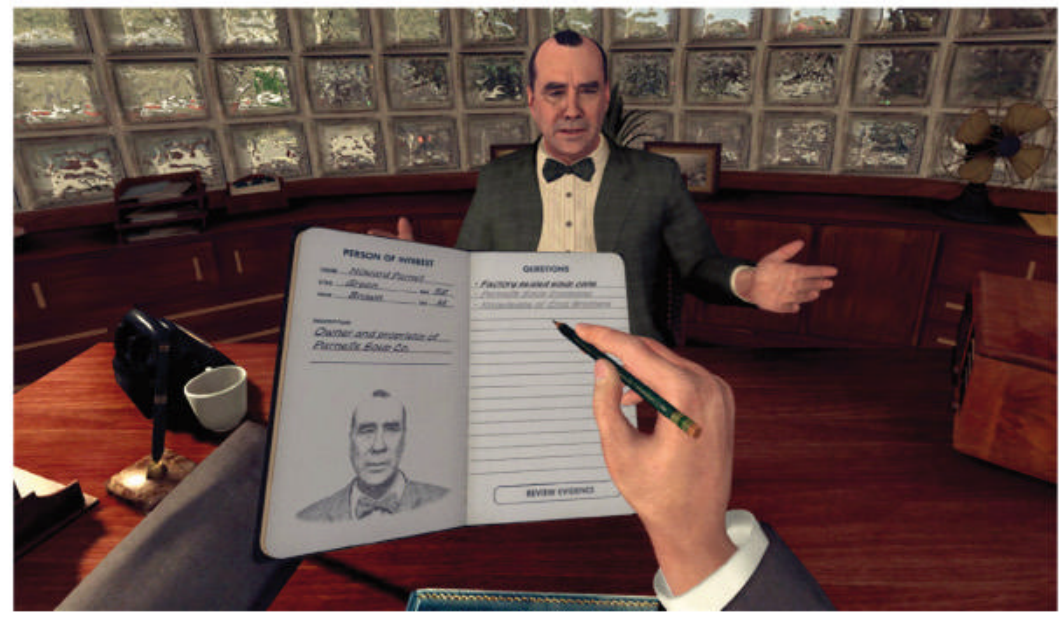
KEY
- Team Bondi
- Team Soho
- Video Games Deluxe

One anonymous ex-Bondi source, speaking to Brisbane-based journalist Andrew McMillen for GamesIndustry.biz in 2011, claimed Rockstar was incredibly hands-on – lending programmers, animators, artists and creative direction to the project. "Rockstar's producers were increasingly influential over the last two years of the game's development, and overruled many of the insane decisions made by Team Bondi management," the source said. "Eventually Team Bondi's management resented Rockstar for taking lots of creative control." Certainly, *LA Noire* turned out to be indicative of Rockstar's direction of travel after *GTA IV* – towards open worlds that were increasingly nuanced, even conversational, in tone.

Once *LA Noire* released, many former developers on the project spoke out publicly. In an investigation McMillen carried out for IGN, sources accused management of treating any staff outside the inner circle of Team Soho veterans as a disposable resource to be burned through. Junior employees were pushed to work long hours, sources alleged, leading to high turnover. When IGN suggested around 100 staff had left during development, McNamara said the estimate was actually low. "Of the people we tried to build the game with, most of them would've never had any experience with this kind of thing before," said the studio head. "And most of them would never have made a game that had these kinds of expectations."

CHINESE DEMOCRACY

Crunch time, one artist claimed, went on and on. With *LA Noire*'s release date regularly shifting, the finish line danced just beyond each staff member's reach, pushing them to sprint for longer and longer. "If you wanted to do a nine-to-five job, you'd be in another business," McNamara countered. *LA Noire* may have been a work of art, but much like the Great Wall of China, it appeared to have been achieved at the expense of its workers.



ABOVE: *LA Noire* encourages a methodical commitment to procedure.

THE CRUNCH SCANDAL KILLED TEAM BONDI'S REPUTATION

In a lesson the games industry has failed to learn from, the crunch scandal killed Team Bondi's reputation. In 2011, Kotaku published an article titled 'Nobody Wants to Work With *LA Noire*'s Developers'. McNamara never directed his intended follow-up, another period action game, set in 1930s Shanghai. Yet he still works with Rockstar, in a quieter capacity, at Video Games Deluxe – the Sydney developer responsible for *LA Noire: The VR Case Files*, as well as an upcoming 'AAA open world VR game'. The medium makes sense: a natural fit for a team with a history of zooming in on the paraphernalia that litters a cityscape. Let's just hope other, less celebrated aspects of its history don't repeat themselves. ■

Jeremy Peel

LA Noire is really a game about Aaron Staton's eyebrows.

How closely will *Redfall* resemble its 2021 reveal trailer?

UNREAL TOUR

What to expect from games running on **UNREAL ENGINE 5**'s 'next-gen' technology

Once or twice a decade we get one of my favourite treats: a new game engine tech demo. These are not actual games. They're better: they're promises of what games could be, pure spectacle showcases for the majesty of a million more polygons on screen and bumpy tessellated surfaces and lifelike ray-traced lighting. Tech demos are raw power and unhinged artistry mashed together, gleefully disregarding pesky problems like 'writing' and 'design' that have to go into proper videogames.

Maybe the best of them was 2011's Unreal Engine 3 Samaritan demo, a three minute slice of gritty sci-fi (still more evocative today than playing *Cyberpunk 2077* in 2021 turned out to be). In 2005 Square Enix created a tech demo of *Final Fantasy VII* for the PlayStation 3 that ended up haunting the company for years until it finally bowed to inevitability and announced the *Final Fantasy VII Remake*. Then there was 2020's ridiculously pretty Unreal Engine 5 unveiling, which was all the more impressive because it included developers talking about how it all works. Using UE5's new "virtualised geometry" technology "artists wouldn't have to be concerned over polycounts, draw calls, or memory", Epic technical director of graphics Brian Karis said in the demo. "They could directly use film-quality assets and bring them into the engine."

UNREAL WORLD

Usually part of the bargain with a tech demo is that deep down we know it's all smoke and mirrors, but Epic said that 2020's Unreal Engine 5 reveal ran in real time on a PlayStation 5. Could a playable game actually live up to that promise? December's The Matrix Awakens demo felt like a pointed answer to that question: even though it's only available on consoles, it's a genuinely mind-blowing representation of how realistic UE5 games can look, blending together UE5's new virtualised geometry, global illumination lighting, and Epic's uncanny MetaHuman creation tool.

We're going to see all of these come into play in the next generation of big-budget games. But when, exactly? That's hard to say: game developers are hesitant to pin down release dates too far out during the best of times, and the pandemic has caused some major delays.

There's a chance that the first new Unreal Engine 5 game we play will be *Redfall*, Arkane's co-op shooter. It's supposedly still due in the summer of 2022, with an open world set in the town of Redfall, Massachusetts, that's inconveniently overrun by vampires. Or conveniently, I guess, since a vampire horde gives us

Unreal legacy

The very first version of Epic's Unreal Engine was developed for 1998 FPS *Unreal*, which spawned multiplayer spin-off *Unreal Tournament*. 2006's Unreal Engine 3 debuted with *Gears of War* and became the most successful iteration of the engine. UE3 was still being used (and heavily customised) in high profile games as recently as 2019's *Mortal Kombat 11*.

FAR LEFT: Will *STALKER 2* be able to compete with *Metro Exodus*' level of detail?

LEFT: *Black Myth: Wukong*, possibly out in 2023, stars the shapeshifting Monkey King. Read Journey to the West for a jumpstart.

DEMO SCENES *Four memorable tech demos across 25 years*

FINAL FANTASY VI: THE INTERACTIVE CG GAME 1995
This Silicon Graphics demo seemed like a precursor to a Nintendo 64 *Final Fantasy*.

FINAL FANTASY VII TECHNICAL DEMO 2005
Square recreated *FFVII*'s opening to show off what the PS3 would be capable of.

UNREAL ENGINE 3: SAMARITAN 2011
Epic made Samaritan to show the power of new DirectX 11 tech.

THE MATRIX AWAKENS 2021
This staggeringly detailed city environment shows off the potential of UE5's Nanite geometry system.

something to shoot and means much of the game will likely be set at night, giving UE5's lighting tech Lumen a chance to shine. But that's just guesswork: all we've seen of *Redfall* so far is a lengthy cutscene.

STALKER 2 nearly had the honour of being the first major Unreal Engine 5 game released in 2022, but it was delayed from the spring to December. *STALKER 2* may be a good showcase for Nanite, that "virtualised geometry" system that allows artists to import extremely detailed models into the game world without slowing it to a crawl. GSC Game World showed off a character model in early 2021, complete with visible "scuffs, scratches, and sticking-out threads", as described by GSC Game World's Zakahr Bocharov. *STALKER*'s developers even built a "teeth tool" to give every ugly mug a unique smile.

Hellblade: Senua's Sacrifice was stunning back in 2017, and since then developer Ninja Theory has leaned even harder into the HUD-free, filmic approach to game design for the sequel *Senua's Saga: Hellblade 2*. Ninja Theory is using photogrammetry in Iceland to capture the landscape and creating, then scanning, real physical costumes to create the digital ones in the game. Senua's facial animations in the first game were created in partnership with a pair of companies called 3Lateral and Cubic Motion, which have both been acquired by Epic and brought together to work on the Metahuman tool. You can bet that tool will play a big role in bringing *Senua's Saga*'s humans to life. When Microsoft showed the game off at December's Game Awards, it still had no set release date.

THERE'S A CHANCE THAT THE FIRST NEW UE5 GAME WE PLAY WILL BE REDFALL

DON'T MYTH

No game made a bigger out-of-nowhere splash in 2020 than *Black Myth: Wukong*, an adventure game based on Journey to the West in development by Chinese studio Game Science. *Black Myth*'s debut trailer looked incredible but was actually running on Unreal Engine 4 at the time; in 2021 the developers upgraded to Unreal Engine 5, a process they described as "unexpectedly smooth" in an interview on the Unreal blog.

"Nanite significantly reduces the difficulty of performance optimization for environments," said tech director and studio co-founder Zhao Wenyong. "And with the help of Lumen, we no longer need to bake the lightmaps or use point lights to fake global illumination." Game Science doesn't expect to finish *Black Myth* until 2023, yet we've seen more of it than any other Unreal 5 game so far. There are more games confirmed to be underway with UE5, but with few details. Korean MMOs *ArcheAge 2* and *Legend of Ymir* are years away, and Square Enix is developing *Dragon Quest XII* on Unreal, but has only revealed a logo.

Unreal Engine 5 has spent the last year available to a limited pool of developers in Early Access. According to Epic, it's finally going to be available to everyone this spring. But the games above are almost certainly not everything in development on the engine right now. The next time we see Vin Diesel fever dream *Ark 2*, *Dead Space* successor *The Callisto Protocol*, or *Mass Effect 5*, they'll likely be showing off Epic's next-gen engine, too. ■

Wes Fenlon

A collection aside

A COLLECTION ASIDE

This collection of games probably reflects MEGHANN O'NEILL's holiday mentality this year; she had more time to play, more time to play with family, too, more time to notice details and a pervasive, but resigned, horror over the Omicron wave of Covid. But, she's not complaining. She had a nice break and hopes you did too. Two of these games are brought forward from the "in lieu of PAX AU" special and all are Australian. There are so many wonderful, homegrown experiences, there's not a lot of impetus to look further afield right now. We hope that this trend continues for many collections to come.

DEFEND THE ROOK

DEVELOPER Goblinz Studio **PRICE** $25.95 **AVAILABILITY** Released **WEBSITE** https://goblinzstudio.com/game/defend-the-rook/

Defend the Rook is like a candy store; the kind where you fill a paper bag with brightly coloured treats, those that catch your eye, both familiar and curious. You can't choose from everything, all of the time, but limitations (arising from randomness and linear progression) lead to flexible and interesting builds. Gameplay is an intriguing mix of turn-based strategy and tower defence. Most of the candy I initially chose was offensive, despite the game's name and premise. I began playing actively and strategically, but eventually enjoyed prioritising passive defences more.

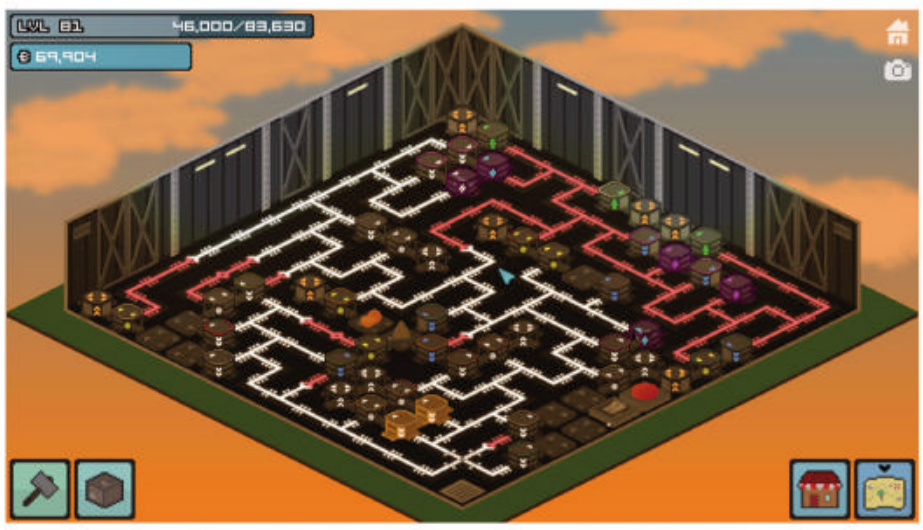
How does it work? You control a rook (with light bombardment abilities) and three heroes; warrior, mage, and rogue. Three kinds of towers can be placed on designated tiles, as well as contraptions, like barrels and traps. Each battle consists of five waves, in which a range of enemies spawn. Your rook must survive. Between each wave, you're offered buffs for each hero, but can choose only one. Sometimes you'll want a balance. Other times, a superhero emerges. After each battle, towers and contraptions can be upgraded. Runs unlock new heroes and rooks.

Managing the heroes reminds me of Ticket to Earth, especially when buffs are related to pathfinding, like +2 temporary power for every square moved. I particularly love the more complex interactions between pieces or buffs, like how the mage tower can strengthen the mage when she is standing nearby, or how you can combine greater movement with greater power for each square moved. All of the buffs to heroes are creatively designed and tell a tiny story. A cute example is Overconfidence, giving the rogue +8 power until they are hit for the first time.

I was also getting Card Hunter vibes when the mushrooms started dividing and damaging my nearby heroes with poison, as they "returned to the soil". There's a neat range of enemies to learn to kill. Valtar, Lord of the Dark, boss of the graveyard battles, is my favourite. He only has ten hit points but is invulnerable until you destroy his crypts. He will prioritise attacking the rook, so it's surprisingly stressful to watch him whittle it away, as you work adjacently to weaken him. Managing heroes, towers and contraptions contextually is pivotal, even in the first few battles.

The UI doesn't always explain itself overtly, but all of the information you need can be found if you search for it. You will be given a preview of the consequences of each hero action on hover, like in Into The Breach, which allows you to approach some aspects of combat like a puzzle, even if you still need to think a few moves ahead, like in chess. Strategy, like whether to strike from a distance, or from close by, will hinge on which candy you have chosen. If I have one criticism, it's that I would have enjoyed the complexity of friendly fire.

I'd offer some advice for your first forays into playing Defend the Rook. Avoid placing certain pieces immediately. Many enemies prioritise attacking towers and, if waves are strong, the towers will succumb before the final boss. Of course, this will depend on how sturdy towers are, based on which buffs caught your eye, as well as whether you've put points into contraptions instead. After ignoring traps for several runs, I have come to appreciate an upgraded and well placed trap immensely. My paper bag runneth over. I hope yours will too.



PIC: Emeralve

PIC: LittleMiffyxo

PIC: LittleMiffyxo

PIC: Lyndon

BLUB EMPORIUM

DEVELOPER Riley Gray **PRICE** $23.95 **AVAILABILITY** Released **WEBSITE** https://store.steampowered.com/app/1592530/Blub_Emporium/

Yes, I play videogames with my kids. Surely every gamer-parent does. We've puzzled over pixel art adventures, and murdered each other across a wacky landscape of party games. When we're not playing together, my kids play stuff I'm not interested in; usually whatever daft shooter their friends are playing. Strangely, I've only recently discovered how fun it is to play the same game, even in the same room, but separately. I'm shocked by my 12 year old's colourful Blub Emporium. It's quite different to mine, but I can absolutely appreciate his approach.

Our experience was of an initially slow progression, where I imagined everything long before I could build it, but (as I'll explain) this may not, ultimately, be yours. It helps that everything is excessively cute. You'll start by learning how to sell rubber ducks from the rubber duck bush, then how to grow latex sap producing trees for the purpose of building a rubber duck factory. You'll apply this knowledge to manufacturing everything from prickle pets, made from cacti and coconuts, to strawberry milk. Blubs like to buy adorable things. And spanners, for some reason.

You're managing the farm, factory and emporium. The way clicks can eventually become automated reminds me of the train dispatcher simulator, RailRoute. Initially, you're picking every bunch of flowers for the flower stand, stocked manually, hoping to pick, or stock, extra by hitting the boost region, on release. Later, you can employ harvesters and automatic hoppers that will immediately source items from your inventory, where you would usually have to load them yourself, on click. I enjoyed the clicks but was immensely satisfied by automation, too.

The factory forms the puzzle, being exasperating, fascinating and rewarding, in equal measure. It's surprising how challenging it can be to effectively arrange hoppers, machines, wiring, conveyor belts, electrical pulses and containers, within the space available. My son (Lyndon) laid down a structure for one, two and (various) three step processes, using interchangeable pieces, in an arrangement that made my head spin. I had to close my emporium when I tried to manufacture something new, just for the sheer amount of time I needed to stare at the problem.

I found pacing slow, but was never bored, due to the glut of challenges, missions and events, leading to content unlocks. Although this is a full release, developers have been making significant and flexible changes to core systems to address community feedback. Probably the most interesting is that you can now level faster, yet the game feels thoughtfully balanced both ways, so it's not as if they're "fixing it", more "experimenting". My son and I loved reading the Discord and you will find community screenshots published here, as well as our own.

I have to say that Lyndon's tangential "YouTuber patter" was quite annoying. But also, I'm touched that Blub Emporium has inspired him to game with me like he games with his friends on Discord; by talking exclusively about his game, not theirs, while they do the same. Although, it's not so bad listening to him, really. He figured out how to structure the mind-boggling book factory and had some clever ideas about managing the rubber duck convention. If this sounds like your kind of experience, gift an extra copy to a friend and share ideas, for sure.

A collection aside

UNPACKING

DEVELOPER Witch Beam **PRICE** $28.95 **AVAILABILITY** Released **WEBSITE** https://www.unpackinggame.com/

Unpacking is (unexpectedly) a puzzle game (though, only a little). As you unload your belongings to cupboards or shelves, you'll have to disassemble the elaborate toilet roll sculpture you built on a stovetop and find more appropriate places for its pieces, in order to (eventually) progress. Is Unpacking about progression? I imagine, for many people, it's more an exploration of orderliness, an Easter egg hunt, a story to unravel, maybe zen busywork. For me, engagement was driven by sound. I wanted to hear everything placed everywhere, solution or otherwise.

Given I've worked a little with Wwise, I guessed at some of the implementation. Composer and sound designer, Jeff van Dyck, then generously shared more insight into the process with me. This work is incredibly detailed. For starters, it was mostly Angela van Dyck who recorded approximately 14,000 unique foley assets for the game, from the placement of a mug onto any of many surfaces, to soundscape elements, like stomping around upstairs, to depict a dorm environment. Many assets are then further randomised or sweetened, in-engine, too.

Were pink socks recorded separately to polka dot socks? No. They're all socks. Jeff explained how careful categorisation mitigated diminishing returns (and a need for infinitely even more assets). I was particularly intrigued by the idea that two objects colliding, if one is very soft, will always sound like the softer object. So, a mug and a baseball hitting a pillow will both make a "pillow sound", whereas a mug hitting any hard surface will make a more nuanced "mug sound". Categorisation is not as simple as "socks are socks", but must also take collisions into account.

Because the player also requires feedback, sound needs to transcend a strictly accurate, aural representation. You will hear recordings of the mug (and every other item) being swooshed away from surfaces, in an explicit way, rather than how you'd really hear this, but in a way that tells the player they are now holding a mug in a videogame. Jeff described Angela recording saying every object's name, swooshing it up, placing it down and loading material into DAW projects, as part of an entirely necessary, acute, organisational practice. It certainly took time.

My favourite sounds are mostly created by those which Jeff describes as “hero objects”, so not the socks, but like the uniquely sticky bath mat, which I could seriously pick up and place down for hours. The suction! He also explained how the piggy bank rattles, over three tiers of intensity, which are blended on transition, by comparing it to the creation of a percussion library for a musical instrument. Based on analysis of the mouse’s movement pattern, Angela even recorded and edited sounds for left and right shake separately, to allow for light shakes and tailing.

Jeff told me his favourite sounds in the game are actually Easter Eggs, where you interact with a music player and hear a tune that was designed to evoke an era and the protagonist’s mood, without being real, or recognisable. I had not found these, so was surprised to discover that they fleshed out the ambient storytelling significantly, for me. I did have a sense that new timbres wove into the texture of the soundtrack, over time, and Jeff confirmed that one character is depicted by a piano, another by an electric guitar.

There are endless connections to be made between conceptual layers in Unpacking, and especially with regards to music. Jeff explained, “My thinking is that the chip aspect of the music represents the pixel art aesthetic, old school graphics, retro-vibe and nostalgia. But this is a wholesome story about a girl’s life. We watch her grow up. Specifically, the acoustic guitar is endearing, sincere, small and personal. And guitar lends the game a certain credibility, too.” It’s an unusual and compelling blend of timbres.

Frankly, everything about the game is credible, from the faithful old consoles, to the kind of possessions one person may own, or discard, over twenty years and across several houses. This is not even set in an imaginary universe. It’s set in Brisbane, with soundscapes even differentiating between downtown and suburban Brisbane. Every toilet in the game has a unique flush because the van Dycks recorded that many toilets. Jeff mentioned that Unpacking’s sound is nominated for awards against AAA titles. I can’t imagine AAA being this detailed.

Jeff ultimately described Unpacking’s sound as being (deliberately) “overengineered”. Was it worth the effort? He says, “Absolutely. It was satisfying to put together, to hear the results and test everything. The positive reaction from players was even more satisfying.” I’m quite sure that this is the most positive reaction I’ve ever had to picking up and placing down objects in a game, which is obviously Unpacking’s entire conceit. I’ve now had a little flurry of listening to how other games do unpacking; The Sims 4, Florence. The van Dycks have set a very high standard.

YOU WILL (NOT) REMAIN

DEVELOPER Bedtime Phobias **PRICE** Free **AVAILABILITY** Released
WEBSITE https://store.steampowered.com/app/1776160/You_Will_Not_Remain/

Apparently, lockdowns in Australia are over. Hooray? If you’re still working from home, or choosing seclusion, You Will (Not) Remain may be a suitable accompaniment to one of today’s many coffee breaks. (And if you’re at home because you actually have Covid, I hope you’re OK and recover quickly.) Part metaphor, part apocalypse, this is a story of routine, courage and many other thought-provoking things. I didn’t find it distressing, but please read the developers’ content warnings, in case you’d prefer not to engage with related topics, right now.

Made during Woman Game Jam, it’s free to play, short and linear, like an interactive short story, although how you choose to interact will affect the minutiae of your experience. A violet cloud menaces the city. The radio is a source of information, instruction and memories. Nightmares obscure reality and you may find comfort with an unlikely companion, as the action unfolds over several, strikingly similar, days. Questions are raised, but not always answered, which I found to be quite compelling. It’s a neat, polished and balanced experience.

I recognised the work of artist, T-Dog eXtreme, because I loved their previous game; Symposium of Grief. Sound is also a highlight and the composer, Talia Raso, told me her process was inspired by the limitations of GameBoy systems, in terms of tone colour and texture. I love the obvious attention paid to the detail of Lambshanks’ evocative bark, in particular. You Will (Not) Remain did remain in my thoughts for some time after I played it, especially because Omicron makes venturing out more confusing. Whether or not to play is an easier decision.

GENXX

NSW drops Safe Schools program as Federal funding ends
...NSW government will replace the Safe Schools program with a new anti-bullying strategy after the federal government refused to fund it beyond mid-year...
Gloria Jean Coffees
You're Teaching Our Children What
Why It M

EQUAL SPACE

3D space is an ideal place to make complex connections.

I've always loved the idea of virtual reality, yet I've never bought a headset in order to experience VR at home. Why? I suppose I (incorrectly) believe that most VR "games" don't fully explore the mechanical, storytelling and immersive potential for the medium. I've played lots of "serious VR games" that do, like Rhett Loban's Torres Strait Virtual Reality, which engages the player in cultural practices. My recent journey inside the investigative documentary, A Clever Label, was both thought-provoking and a reminder not to discount the specialness of VR so easily.

Creator, Michela Ledwidge, became interested in why it had taken so long for marriage equality to be realised in Australia, given that the population was supportive for perhaps a decade prior to the 2017 plebiscite. During the introduction, "Virtual Michela" raises that The Australian Christian Lobby's name is "a clever label" because it sounds like it represents all Christians, yet the numbers (relating to census, supportiveness and religion) don't add up. The experience then invites you to investigate links between the ACL, marriage equality and political process.

To my mind, consenting adults being able to legally marry each other is a no-brainer, so I'm not sure I'd previously cared to learn much more about the wider context of how marriage equality was approached, politically. The data inside A Clever Label is compelling, especially because I actively chose it myself, by grabbing it or pulling it towards me on a string. Clutching content about the abolition of Safe Schools, then organising it into 3D space next to the other things that had "made me feel uncomfortable" (or some other idea) was surprisingly evocative.

Ledwidge says that engaging, in a way that makes sense to each individual, provides a unique and innovative opportunity to explore "difficult to explain topics and controversial data". She asks, "Could it have an impact on how we debate?" I became particularly interested in how lobby groups are funded, including how donors are disclosed (or not), and created a little floating mess, on that theme. It would be fascinating to see how others arranged related and/or different content, both as an insight into how they think and what I'd missed, or not considered.

If you're all set up for VR, I'd highly recommend A Clever Label on Steam. I found much of the (often directly destructive) action taken towards LGBTQ+ communities distressing, but all of this content is real and freely available on the internet. Making connections in this way feels so important. Ledwidge also says that Mod is "working on a generic tool, so that it is easier for anyone to slurp their own content into a VR graph and explore it," and that open source support is also planned for the future. I'd be excited to explore more "controversial data" in this way.

I remember playing a cylindrical VR platformer at PAX AU one year. It was cool, but apart from making me thoroughly dizzy, it was really just a platformer. Has A Clever Label convinced me that VR can be more? It did inspire a little flurry of watching VR games online, like Beat Saber and Walkabout Mini Golf, in a way that challenged my perception. Ledwidge suggests, "Now that we have a solid mechanic for investigating threads in VR I'm keen to explore how this can work in fiction, like in a detective game mode." I'd (almost certainly) buy a headset for that.

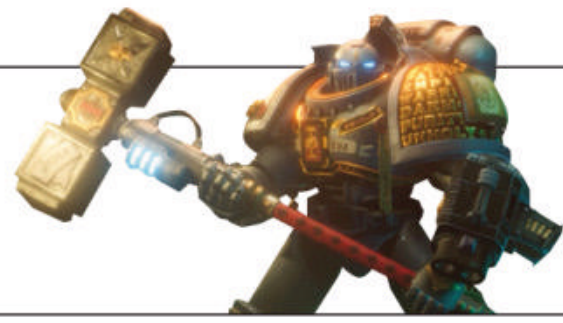
Meghann O'Neill has always wanted to be a cyberpunk cop, just for the brain tech and bootleg moonshine.

The source for tech buying advice

techradar.com

WRATH
AQUILA
PYRE

Warhammer 40,000: Chaos Gate – Daemonhunters



NEED TO KNOW

RELEASE	DEVELOPER	PUBLISHER	LINK
May 5, 2022	Complex Games	Frontier Foundry	chaosgate.com

WARHAMMER 40K: CHAOS GATE – DAEMONHUNTERS

XCOM vibes, but with cosmic plagues and almost no RNG

Turn-based tactics games have been cursed with comparisons to Firaxis' indomitable *XCOM* for almost a decade, which the Grey Knights of *Warhammer 40,000: Chaos Gate – Daemonhunters* are about to learn. Sorry, lads, but *Warhammer 40,000: XCOM* is just easier to remember.

The Grey Knights, if you're not au fait with 40K's many Space Marine chapters, get their rocks off by hunting daemons, which they also happen to be very good at. These special boys were engineered from the gene-seed of the Emperor, and while they're designed to be the ultimate weapon against the forces of Chaos, most people don't know they exist. So they're black-ops super soldiers with an important daddy.

Like *XCOM*, you'll be putting together squads of these Grey Knights, customising them with equipment suited to the task at hand, and then dropping them into maps full of enemies and cover. The Grey Knights also have an HQ from which they can plan their next move, exploring a holographic representation of the space sector. But while the foundations cry *XCOM*, everything has been reconfigured for a universe of infinite war, where humanity faces down dark gods and cosmic plagues.

This specific set of Grey Knights have just finished a campaign, and with their resources low and their ship worse for wear, they're about to head home. Nobody gets time off in the grimdark future, though, so of course an Inquisitor appears and tasks them with investigating a new plague conjured up by the pestilent god Nurgle: the Bloom.

THESE SPECIAL BOYS WERE ENGINEERED FROM THE GENE-SEED OF THE EMPEROR

KNIGHT SCHOOL

NEW INFO

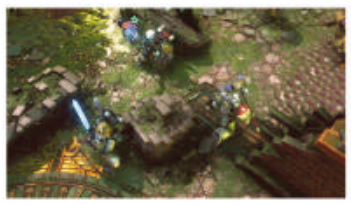
Worlds are being consumed by this blight, in turn empowering Nurgle and his horrible minions, and even walking tanks like Grey Knights need to prepare before they drop in and start carving up Plague Marines and Hellbrutes. Your massive space cathedral houses a Libris Malleus, where you can research the Bloom, develop tools to support your troops, and select one-shot psychic abilities; a Strategium containing the barracks, as well as an armoury that allows you to get your hands on better gear and more experienced knights; and the Manufactorum, where you can fix up and upgrade your ship, along with buffing up your knights. There's a lot to look at before the bolters start firing.

There are four different classes of Grey Knight, filling basic roles like tank and support, and four more advanced classes that are yet to be shown off. Between the weapons, armour, wargear, psychic abilities, and cosmetic customisation, there are a lot of ways to build a Grey Knight even within a single class, and that level of investment will probably make it sting all the more when they die (thanks to *XCOM*-style permadeath).

It's impossible to look at the list of practical gear and cosmetic flourishes and not have flashbacks to days spent hunched over my desk, building armies and kitbashing models. Much of what's contained within Games Workshop's Grey Knights Codex is present here, from their grenades to their Servo-skulls, along with fancy and unique master crafted weapons that you won't find elsewhere. You won't have access to everything straight away, of course, so you'll need to disrupt the plans of Chaos a bit before you start building your perfect squad.

Daemonhunters makes it easier to plan for dust-ups with Nurgle's nightmarish horde by doling out intel before you make landfall. The holographic star map shows you the level of corruption

Warhammer 40,000: Chaos Gate – Daemonhunters



on specific worlds, which informs what types of enemies you'll encounter, the likelihood of unwelcome random events, and what your mission objectives will be. Maps are transformed by the Bloom, with higher levels of corruption changing the layout and introducing new hazards. You can also see what the mission rewards are, allowing you to prioritise based on what catches your eye the most. Orbiting a world reveals even more information, like what strain of Bloom is affecting it, which determines what mutations and negative effects you'll have to worry about.

SICK AS HELL

I had to watch a developer beat up Nurgle's minions instead of getting to slay them myself, but even hands-off it really looks like Complex Games has nailed the feel of their Space Marines. These are hefty badasses that move with menacing deliberateness, but are still capable of surprising agility. And they are masters of extreme violence, dismantling maps as deftly as they dismantle their foes.

Nurgle, meanwhile, is shaping up to be a fun opponent. His worshippers are the most gruesome of all the Chaos abominations, and there are few things as unappealing as being grabbed by one of his plague-ridden Hellbrutes, all tentacles and boils. They must smell terrible. No wonder the Grey Knights are trying to rid the galaxy of them.

The prevalence of cover means you can play defensively, but it's destructible, and these daemon-slaying super soldiers are much more comfortable charging into the fray. This is really emphasised by the precision targeting system. At range, this means positioning affects damage, so you're more efficient depending on where you're standing relative to the enemy, but it's in melee where the system really seems to open up.

If you get in close to a stunned enemy and select a melee attack, you'll be able to select specific weak points. Targeting one spot might inflict bleeding damage, while breaking their weapon could lock them out of crucial abilities. Once they've taken a beating, you can execute them, putting them out of their misery with a flashy, cinematic coup de grace that's evocative of a *Mortal Kombat* fatality. This also gets the Knights all fired up, giving everyone in the squad an extra action point.

IT'S IN MELEE COMBAT WHERE THE SYSTEM REALLY SEEMS TO OPEN UP

NO DICE

Daemonhunters' relationship with RNG is one of the most notable deviations from the *XCOM* formula. The Grey Knights are the elite of the elite, so you know they're going to hit their targets. And you can see how much damage you'll be able to do from your position. When RNG does rear its head, it's to your benefit, as it gives you the chance to score a critical attack. This not only increases the damage of the strike, it's also another way to access precision targeting in melee.

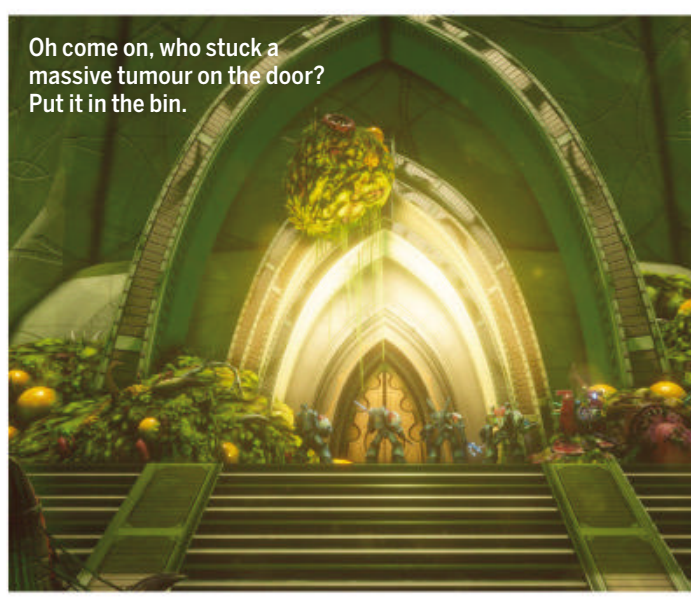
Warp surge events also introduce a bit of randomness in combat. You're warned about the likelihood of their appearance before you select the mission, but you won't know when they'll appear or what shape they'll take – maybe your troops will become afflicted with the plague, or enemies might develop new mutations, or a whole bunch of new enemies could be summoned. But when your back's against the wall, you've always got your psychic abilities to fall back on, giving your squad some extra pep or assaulting the enemy with psychic violence.

The environment can be used to your advantage, too, with *Daemonhunters* allowing you to demolish cover or even knock statues onto some unsuspecting Plague Marines. And there are a lot of statues. Humanity in the far-flung future just can't stop carving them. Pretty much everything can be destroyed, and it's not always about harming your foes – you can also break through walls to create new paths through the map.

At the end of the demo, the Grey Knights have to tackle one of the massive aforementioned Hellbrutes. It serves as the map's ultimate challenge, but there will also be proper bosses connected to the campaign narrative. Complex Games isn't giving much away, but they'll apparently be massive in both scale and capability, requiring a lot more work to take down, like drawing them into terrain where you get an advantage.

Despite the prevalence of tactics romps that evoke *XCOM*, *Daemonhunters* seems to embrace Warhammer with such gusto that it didn't feel like I was watching a repeat. The threat of the Bloom, the lack of RNG, and the hyper-violence all promise to set it apart, and we'll find out if it follows through when it appears on May 5.

Fraser Brown



Oh come on, who stuck a massive tumour on the door? Put it in the bin.

AFFLICT BLEED (00)
DESTROYED
EXECUTE
This enemy is destroyed. All allies gain +1 AP.
CHOOSE TARGET
WARHAMMER 40,000: CHAOS GATE - DAEMONHUNTERS - ALPHA IN-GAME FOOTAGE

ABOVE: Andy Serkis of Lord of the Rings fame voices your stern but righteous mentor.

LEFT: Space Marines love an execution, almost as much as they hate heresy.

Dune: Spice Wars

NEED TO KNOW

RELEASE	DEVELOPER	PUBLISHER	LINK
Auttumn 2022 (Early Access)	Shiro Games	Funcom, Shiro Games	dunegames.com

DUNE: SPICE WARS

We'll be Dune some spice mining

Arrakis. Dune. Desert Planet. We've seen it before in books, movies and games, but the desert planet of Shiro Games' upcoming *Dune: Spice Wars* takes its own approach to the world. While Spice remains key to gameplay, Shiro's approach tackles the broader galaxy of Dune in a way that most prior games haven't attempted.

I got to see *Spice Wars'* blend of 4X and RTS gameplay in a hands-off gameplay demo, and it's looking very promising. It included the broad outline of the start of a singleplayer *Dune* campaigni as House Atreides, as the player ventured out from their single starting territory to explore the surface of Arrakis.

Dune: Spice Wars shares a lot of design basics with Shiro's critically acclaimed *Northgard*, an RTS cantered on capturing and controlling territories rather than spreading out over a wide-open map. That works pretty well with the 4X DNA present in *Spice Wars*. Expanses of desert terrain form distinctly-outlined territories which each contain a small town. Conquering the town confers control of the territory, and each section of desert can be exploited for resources like Spice for trade, Plascrete for buildings, or various rare commodities to sell for cash.

Taking territory is just not just about selecting some troops and marching them on over like you might've done in a *Command & Conquer* game. Factions like the Atreides can diplomatically annex small towns, but it takes a lot of time. They can also roll in the troops, but that's expensive and dangerous: the locals put up a fight, and conquering one town will set others against you as Fremen bandits then come to raid your territory. Further, any troops venturing outside your turf are automatically on a clock: once they run out of supplies, they'll quickly die.

The desert isn't a homogenous expanse of sand. Deep Deserts are the equivalent of oceans in other 4X games, and foot units there rapidly run out of supplies and are at risk of sandworm attacks. Meanwhile, special territories like the polar ice caps can supply resources otherwise very hard to get.

TAKING CONTROL OF DUNE WILL REQUIRE CLEVER USE OF SOFT POLITICAL CURRENCIES

NO PLACE LIKE CHOAM

Most of *Northgard's* resources went towards building obvious material things. For that, *Spice Wars* really just has Solaris, Plascrete, Manpower, and Water. Truly taking control of Dune will require clever use of soft political currencies, in addition to agents to infiltrate and lobby important organisations. Meanwhile, your resources go towards backing up those plays by expanding your holdings.

FIRST LOOK

Dune is a far more political than military work of science fiction, and *Spice Wars* appears to respect that. Though the game takes place only on Arrakis, the politics of the wider Imperium and its factions are vital to success. Players will curry favour in the Landsraad, trying to pass resolutions and laws that favour themselves over others. The goal is to be appointed governor of Dune, but that's a path they'll find difficult if they're too aggressive in military conflict.

Landsraad favour is just one of the currencies players can accrue and spend. Your Authority goes towards pleasing factions like the Spacing Guild, Bene Gesserit, Emperor, and others, for which you get direct rewards. There's also the Spice sales and distribution company, CHOAM, which happily buys up all the spice you don't personally hoard – and you have to hoard some, since the Emperor also demands a direct tax in it. Remember: the Spice must flow.

You don't have to wait long before you can try some space politics for yourself – *Dune: Spice Wars* will released as a Steam Early Access game this spring.

Jonathan Bolding

The largest city on Arrakis is the base of House Atreides.

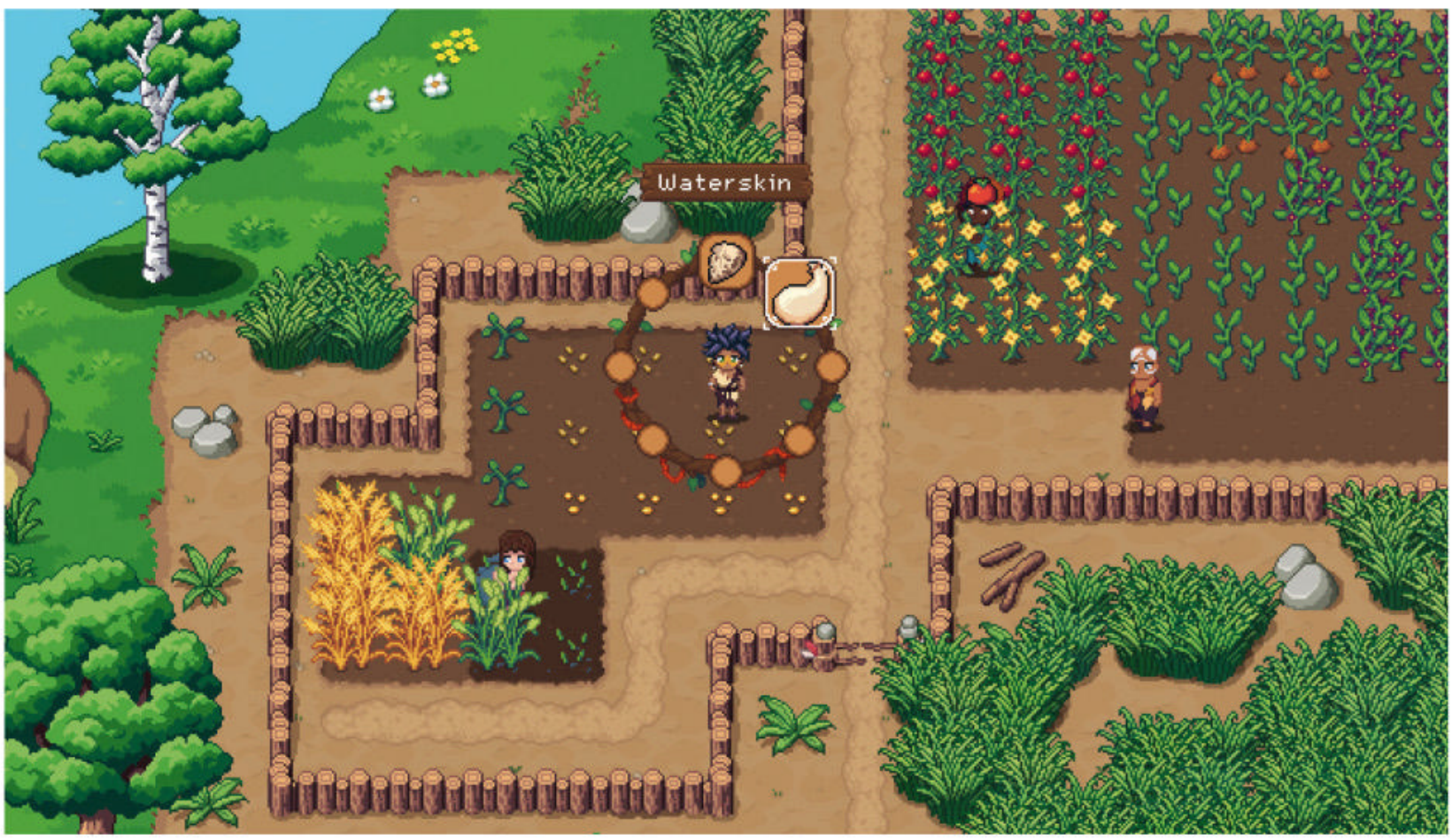
ABOVE: Harkonnen troops, in red, deal more damage as they are hurt.

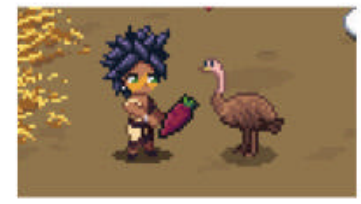
LEFT: You may hate each other, but diplomacy is still possible.

Roots of Pacha

ABOVE: I wish someone would invent bridges already.

RIGHT: Charming NPCs will send you off on errands.





NEED TO KNOW

RELEASE	DEVELOPER	PUBLISHER	LINK
Late 2022	Soda Den	Crytivo	crytivo.com/en/roots-of-pacha

ROOTS OF PACHA

The perfect farming sim for anyone keen on the stone age

Although still in its alpha stages, farming sim *Roots of Pacha* already has the potential to overtake its genre counterparts. At first glance, it's easy to assume another duplicate of the much-adored *Stardew Valley*, but with more intuitive tool systems and a welcome, communal approach to farming, it has enough new ideas to stand out.

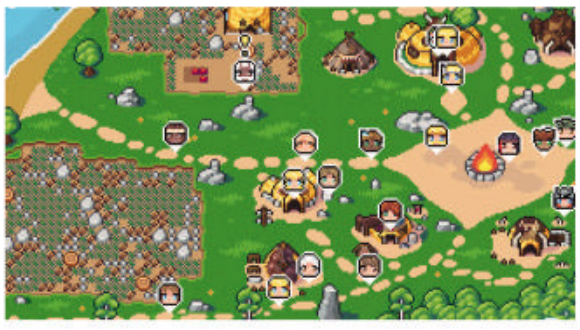
Studio Soda Den, after a successful Kickstarter run and heaps of attentive tweaking, has begun to cultivate a serene setting and a wholesome, captivating narrative – one that even can be shared with friends in multiplayer mode.

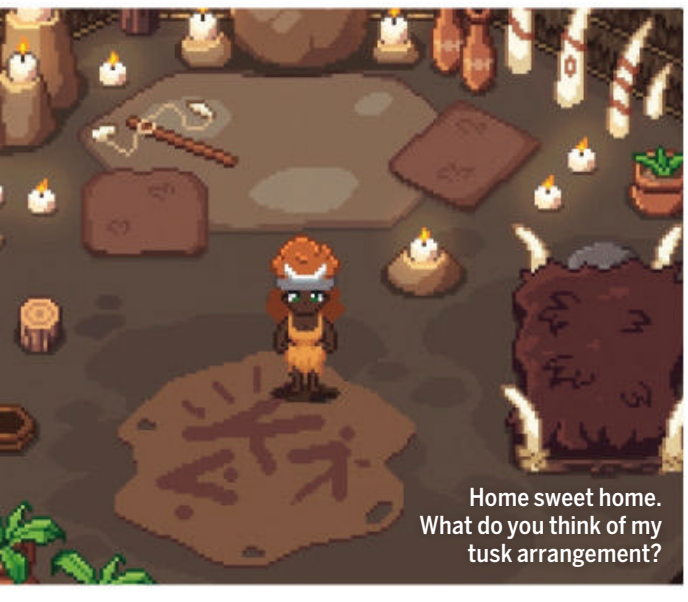
Through it, we follow the traditions, innovations and foibles of the peaceful, prehistoric settlement of Pacha – a fictional village inspired by a diverse range of cultures. In a genre where most games are set in the modern world, with refrigerators and automatic milking machines, *Roots of Pacha* goes right back to the start, to the birth of agriculture itself.

You can't just buy seeds in a shop. You have to discover wheat, forage for veg, and impress the animals of the forest with gifts and music, like a stone-age pied piper. And it's not just the prehistoric twist that sets *Roots of Pacha* apart from other farming simulators.

For one, it turns out cavemen weren't forced to lug anywhere near as much stuff around with them. When you're starting out, a sharp stone is all you need – your hand axe handles everything from fishing, to weeding, to breaking rocks. This supreme multitool approach right from the start is much appreciated when you're busy filling up your satchel with new kinds of veg and magic mushrooms, streamlining away early game friction.

Any tools you do acquire to improve your yield don't take up normal inventory spaces, either. They live on their own little wheel separate from your other items, as do the many seeds gathered while out scavenging in the wilds.





Home sweet home. What do you think of my tusk arrangement?

GOES RIGHT BACK TO THE START, TO THE BIRTH OF AGRICULTURE ITSELF

ME-ANDERTHAL

Once you've caught a fish, or harvested some carrots, you can place them in the community pot as a contribution. The more contributions you make, the more elaborate ideas you can develop to improve the settlement. Otherwise, you can keep them for recipes, smoke them to preserve them, or even gift them to a friend or prospective spouse.

When you're off looking for characters to collude with, there's no need to search the wiki for their location, or commit their daily schedule to memory either. You can just spot them live on the map, which makes advancing the narrative so much less of a pain.

PLAYED IT

Even the little touches are surprisingly impactful. It's impossible to accidentally reap your crops, for example, and while that might seem inconsequential to some, the fact you can not only weave through weeds but also that no crops block your way is revolutionary. No more being concerned about which seeds need to be planted in rows, just vast, mixed-crop fields as far as the eye can see.

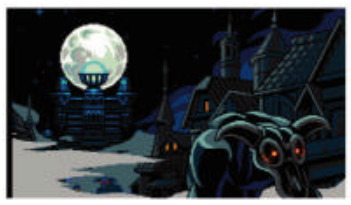
There is so much more to say, but right now I'm too busy looking forward to discovering ostrich mounts, and auto-watering contraptions for my crops.

The developer is aiming for a late 2022 release for *Roots of Pacha*, with plenty more updates on the way before then. There's a hugely welcoming Discord channel if you want to get into the community, and help improve the game with any suggestions.

Now to figure out what to do with this poop I just picked up and ponder why, strangely, no one seems to want to dance around the fire with me.

Katie Wickens

Mina The Hollower



NEED TO KNOW

RELEASE	DEVELOPER	PUBLISHER	LINK
TBC	Yacht Club Games	In-house	yachtclubgames.com

MINA THE HOLLOWER

The *Shovel Knight* team's latest project brings a gothic challenge

When contemporary developers revisit the design conventions of gaming's past, they face an inevitable challenge. Authentically capturing the feel and look of older titles can be a tricky thing to balance with innovation. That's something the team that brought us *Shovel Knight* seems to be working through with their coming creation, *Mina the Hollower*.

Yacht Club Games' crowdfunded release openly evokes a very certain type of gaming experience. *Mina the Hollower* wears its action adventure influences on its sleeve, with the team happily pointing to *Castlevania*, 2D *Zelda* titles, and the Game Boy Color's crisp 8-bit visuals as sources of inspiration.

Playing the early demo, *Mina the Hollower* absolutely evokes a sense of those titles. Tonally, it leans into the eerie and gothic, and as has become expected of Yacht Club, the visuals are sharp, boil with energy and personality, and move magnificently. And, certainly, the stylistic legacy of *Castlevania* can be felt throughout the demo. The faux-isometric presentation and general systems, meanwhile, take a clear lead from *Zelda* and its ilk.

What all this means is traversing various landscapes, dungeons, and eerie gothic structures searching for keys, fighting monsters and sentient globules, and unpicking a story of a prosperous island that hides dark secrets – a narrative that hardly gets started in the available demo.

THIS IS A GAME WHERE YOU'LL HAVE TO BE AT PEACE WITH DYING A LOT

PLAYED IT

DIGGING DEEPER

So far, so familiar. There is, though, a slightly more complex game lurking beneath this work of apparent simplicity. It also sports a few flourishes that, if not truly unique, bring a fairly distinct flow to the experience. Armed with a whip, a sprightly jump and occasional secondary melee weapons that brought ranged attacks in the demo, Mina is a capable fighting machine. Yet is it her ability to briefly burrow underground and move quickly beneath threats or round obstacles that has let the game's creators shape environmental puzzles and combat dynamics that will hopefully keep Yacht Club's adventure captivating throughout.

You'll also find some streamlined RPG-like systems around levelling up weapons, filling and using health potions, reclaiming gains from previous lives, and allotting performance boosters to slots to prioritise certain abilities.

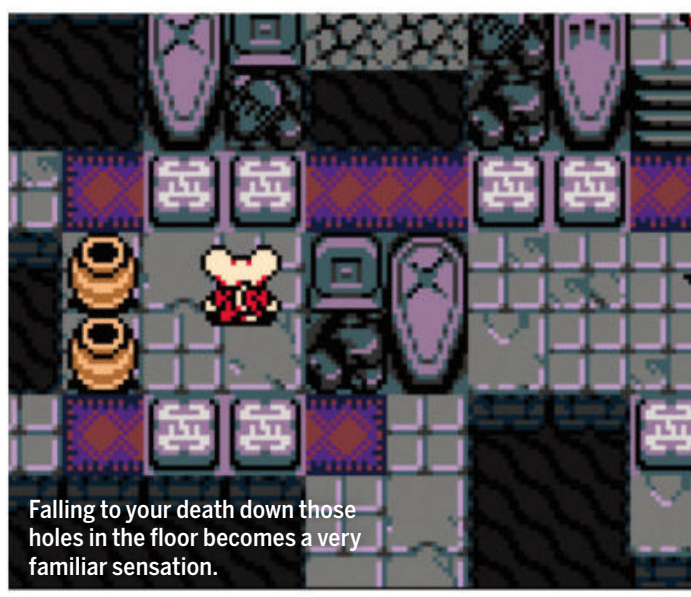
Mina absolutely faces a tough journey. This is an unforgiving game, and throughout the demo what could be mistaken for simple battles on first sight were complicated by erratic attack patterns, an abundance of floor holes to be knocked down, and a sometimes startling speed.

It's worth noting that for now the control inputs feel a little too loose and billowy to compliment the need for accuracy in combat and when negotiating obstacles. This is a game where you'll have to be at peace with dying a lot; but in the demo a lack of input responsiveness made some run-ins with the grim reaper a little bit frustrating. And yet the difficulty is part of the appeal here, because overcoming and progressing was always rewarding as I played. Meanwhile, the boss battle at the taster's end impressed a lot, bringing a bit of arcade gaming's frenetic flavour to proceedings.

Elsewhere, a lack of guidance in the very early game made working through the various upgrade and item systems somewhat confusing, so we can only hope that is addressed in the final version.

Thus far *Mina the Hollower* has proven delightful if a shade familiar, while punishing and charming in equal measure. It might not reinvent its genre, but there's plenty of promise in this mouse's tale.

Will Freeman



Falling to your death down those holes in the floor becomes a very familiar sensation.

ABOVE: The sharp, punchy, 8-bit-inspired visuals shine most during the cutscenes.

LEFT: Many of the characters you meet on your journey offer playful spins on monster tropes.

GABE

Is the **STEAM DECK** a PC gaming revolution, or just another hardware boondoggle?

Steam Deck specs

APU: AMD Aerith

Process:
7nm

CPU architecture:
AMD Zen 2

CPU clock speed:
2.4 - 3.5GHz

Cores:
4-core / 8-thread

GPU architecture:
AMD RDNA 2

GPU clock speed:
1 – 1.6GHz

Stream processors:
512

RAM:
16GB quad channel LPDDR5 @ 5,500MT/s

Storage:
64GB eMMC / 256GB NVMe SSD / 512GB NVMe SSD

Display:
7-inch touchscreen

Native resolution:
1280 x 800

Refresh rate:
60Hz

Audio:
Stereo speakers, 3.5mm jack, dual mics

Connectivity:
Wi-Fi, Bluetooth, USB Type-C with DisplayPort 1.4 support

Battery:
40Whr

Size:
11.7 x 4.6 x 1.8-inch (298 x 117 x 49mm)

Price:
US$399 (64GB) / US$529 (256GB) / US$649 (512GB)

GEAR

All Hands on Deck

How does it play? ***By Wes Fenlon***

There's going to be a whole cottage industry of Steam Deck accessories – the versatile USB-C dock, the fastest micro SD card, the most convenient travel keyboard and mouse – but I'm here to tell you that the single best Steam Deck accessory is a throw pillow. It turns out that the small, overly firm decorative pillows have been on our couches all this time just waiting for a higher calling: a Steam Deck to plop down on top of them. After hours of gaming on Valve's new handheld PC I'm amazed by how capable it is, but that power comes at a heavy price. As in, like, the Steam Deck is really heavy.

It's inescapably a bulky device, weighing 68% more than the Nintendo Switch and 38% more than an iPad. Holding it high enough to keep my neck happy, I started feeling a twinge in my forearms after 20 minutes of *Resident Evil 2 Remake* and definitely needed a break before an hour was up. Thankfully all it takes is a pillow to solve my biggest criticism of the Steam Deck – as soon as I nestled one into my lap, I was cosy and ready to spend a whole evening emulating *Persona 3*, exactly the PC gaming experience I hoped the Steam Deck would give me.

BEST OF BOTH

From the beginning Valve has insisted that the Steam Deck is a PC that you do whatever you want with. Take it apart, install Windows, futz around on the Linux desktop to install other launchers. That's all true, but the more I use the Deck, the more I'm genuinely amazed at how well it manages to be both PC and console, simultaneously deeply versatile and dead easy to use. Valve's debut of SteamOS with Steam Machines may have flopped, but years of iteration have finally turned it into a secret weapon.

The UI is intuitive: the 'Steam' button brings up a menu of major screens like your library, the store, downloads, and settings. The '…' button pulls up a quick settings menu that would look at home on a smartphone, with brightness and volume sliders and toggles for features like Wi-Fi and night mode. The battery tab gives a nice estimate of how much life you have left based on the current use, and the advanced options let you tinker with all the framerate and power limits you want.

TOP: Even though it's heavy the Deck is easy to control.

BELOW: *The Witcher 3* runs great on the Steam Deck.

It all works seamlessly while a game is running. So does the controller configurator, the Deck's greatest feature. If a game lacks official controller support, like Japanese indie classic *Cave Story+*, you can press the Steam button while it's running, open up the controller settings, and likely pick a community-made configuration that works brilliantly (shout out to capy's bindings for this one). The PCSX2 and Dolphin emulators I installed weren't

built with controller-friendly UIs, so I set up the Deck's trackpad as a mouse and its back grips as left/right click, then configured the rest of the inputs to mimic the original console controllers. I could even bind keyboard shortcuts like save states to the leftover grips.

That flexibility allows the Steam Deck to stretch beyond what consoles are typically capable of, but SteamOS still delivers their biggest perks. I'm in love with how seamlessly suspending games works: even when I'm running an emulator I can just tap the power button to put the Deck to sleep and pick up where I left off an hour later. The same goes for hopping into settings while a game is running and then returning to the action. Alt-tabbing often isn't even this smooth.

THE RIGHT STUFF

Bouncing around my Steam library has reassured me that most games will work on the Deck even if Valve hasn't slapped a Verified badge on them. It's also helped me hone in on what, exactly, I want to use this device for.

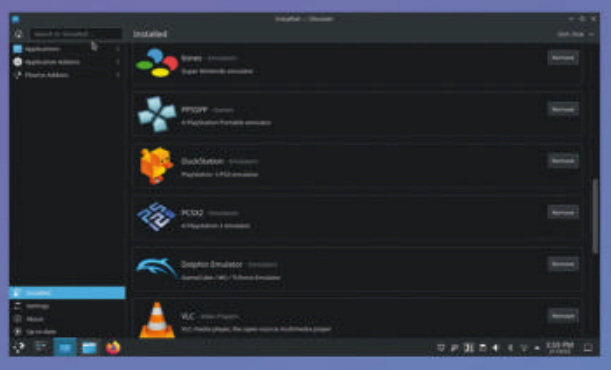
Breezy games like *Monster Train* and *Into the Breach* run with gigahertz to spare, but I've happily played both on my six-year-old ultralight laptop, too. While the Steam Deck is portable enough that I'd pack it for a trip, it's too chunky for me to toss in a backpack for a day out and about, which I *would* do with a Switch. It's impressive that *Resident Evil 2 Remake* runs at a stable 60fps, and Nightdive's new retro shooter remaster of *Powerslave* runs like butter too. But I'd rather play both on my gaming PC, where I can max out *Resident Evil* to appreciate that moody lighting and aim with a mouse in *Powerslave*.

This will naturally differ for every PC gamer. To me it's a good fit for moderately demanding indies like *Death's Door* and *Hades* that don't run at 60fps on the Switch. Emulation, though, is why I'd buy it. I just can't sit at my desk to play 100-hour JRPGs, but now that I can play them under a blanket on the couch without hogging the TV? Hoo boy, do I have a lot to catch up on. ■

FROM THE BEGINNING VALVE HAS INSISTED THAT THE STEAM DECK IS A PC YOU CAN DO WHATEVER YOU WANT WITH

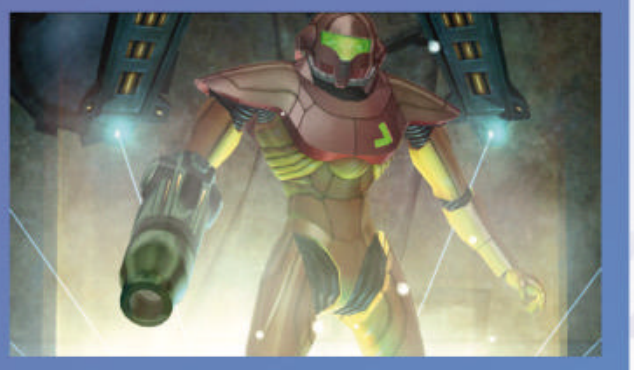
History in your hands

The Steam Deck truly is an emulation dream machine



Setup

The Deck can swap over to a Linux desktop, which includes a handy app store that can install loads of up-to-date emulators with a click – no terminal fuss! It makes the process of setting up emulators remarkably simple. I used desktop Steam to add them to my library for easier access and controller mapping, then just copied the games I wanted over on a USB-C flash drive.



Dolphin

I told myself I'd use the Deck to finally finish *Paper Mario: The Thousand Year Door*, but the second I loaded up *Metroid Prime* those plans melted away. It runs at a beautiful 60fps (aside from a few frame drops when opening doors) and still has atmosphere off the charts, while getting a projected five-and-a-half hours of battery life.

KEY SETTINGS: 2X INTERNAL RESOLUTION, KEEP RENDER WINDOW ON TOP

PCSX2

Detected controller mapping out of the box, so I jumped right into the infamously bizarre *Mister Mosquito* before playing five hours of *Persona 3 FES* with a widescreen hack enabled. The Deck never dipped from 60fps and projected six hours of battery life .

KEY SETTINGS: 2X INTERNAL RESOLUTION, MTVU MULTITHREADING

PPSSPP

Incredibly easy to use. You can navigate this PSP emulator's UI with the analog stick instead of relying on Steam's trackpad mouse mapping. I just pointed it to my game folder and dove into the sole game I have this emulator for (with perfect performance): *Tactics Ogre: Let Us Cling Together.*

KEY SETTINGS: 3X RESOLUTION, NEAREST TEXTURE FILTERING

Steamed RAM

How does the hardware perform? *By Dave James*

The Steam Deck is one of the most versatile, most intriguing gaming PCs I've ever played with. It's a handheld device that will draw immediate, probably unfair comparisons with Nintendo's Switch, but is 100% PC in both the best and worst ways.

It's important to note I'm writing this before launch, with a 512GB version of the Steam Deck that still has to be considered unfinished. But that's only in relation to the software side of the equation and, while that is absolutely vital to the smooth running of the device, the hardware itself is final. And really impressive.

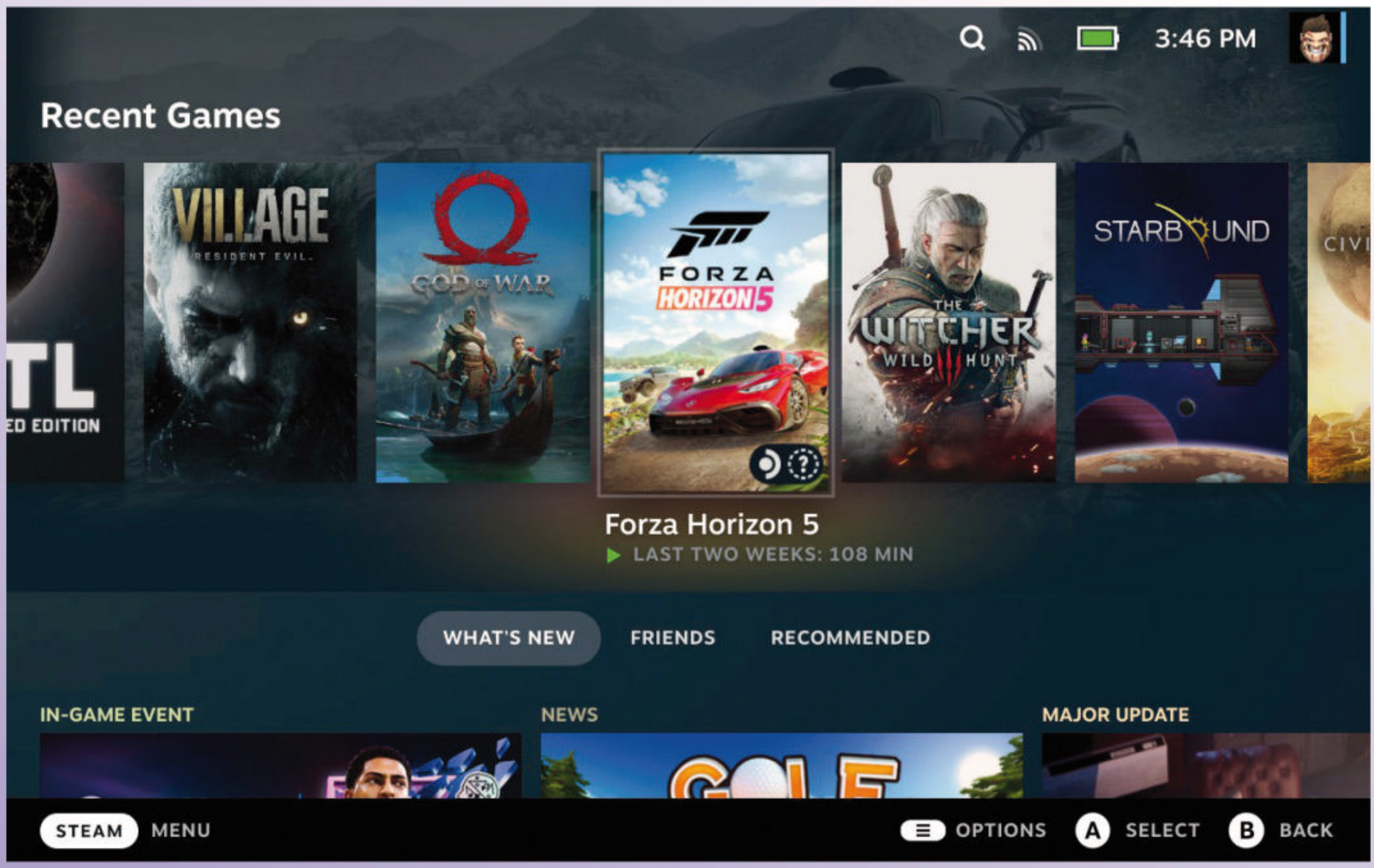
Core to the whole thing, and the piece of the puzzle most responsible for the Deck actually being a genuine gaming PC, is the AMD silicon sizzling away at its heart. The custom-designed AMD Aerith APU (heavily based on the long-rumoured AMD Van Gogh design) is using the same GPU cores as those in the outstanding RX 6000-series graphics cards. Yes, the ones you're still struggling to buy.

One of the keys tenets of the chip is its sustained performance. There's no throttling here. Whether you're getting your juice from the mains or roaming free, sucking on the 40Whr battery inside the Deck, you will get the same performance no matter watt. And that sustained performance is great, too.

STACKED DECK

At the reveal event I listened with some scepticism as Valve devs claimed the Deck would be able to run your entire Steam library and they had yet to find a game the hardware couldn't handle. But, while we've found some Windows games in our libraries that won't run on Valve's custom SteamOS Linux distro, the majority do, and run well.

OUT OF THE BOX, THE GAME WAS LOOKING GREAT AND RUNNING AT AN UNBELIEVABLY SMOOTH 81FPS



I'm not just talking about having *Stardew Valley* and *FTL* running like a dream either (though they obviously do), I've had *The Witcher 3* looking great locked at 30fps, with *Deathloop* on high between 30 and 45fps, and even *Forza Horizon 5* skipping across the desert at a 47fps framerate with high settings. The one that really got me was just how well *Resident Evil Village* plays on the Deck, though. Out of the box, the game was looking great and running at an unbelievably smooth 81fps on average.

That's largely thanks to the fact I'm outputting to its 1280x800 resolution screen, but we've long had integrated laptop graphics struggling to get playable framerates, at high settings, in modern titles at 720p. AMD's first RDNA 2 APU looks a winner if the Steam Deck is anything to go by.

We've not been so lucky in other games, however. *GTA V* refused to get past Rockstar Social Club, *Skyrim* sadly freezes regularly despite otherwise great performance, *Civilization VI* (listed as a Deck Verified title) doesn't load, and neither did *Halo Infinite*. Though that meant my ego was not bruised from being brutalised online, struggling with the gamepad-based controls.

Then I've also had *Valheim* running like a bit of a dog, too, despite it not really being the most demanding of games. At high settings in the Viking survivalists' playground I was seeing an average of just 23fps, with minimum framerates at just 14fps

Still, the fact that a host of modern, high-end games run so well on this wee handheld – the majority we tried in fact – is testament to the work Valve has put in on the Deck and its Proton Windows game compatibility layer. And future updates may still solve this issues.

POWER PLAY

The issue with running at both high framerates and high settings with a sustained level of performance, however, is the battery takes a pounding. We're used to gaming laptops with battery lives measured in minutes, but as a handheld gaming device the Steam Deck needs to do better than that. And, when I first pulled it from that travel case, it most definitely did not.

About an hour-and-a-half uptime was the standard response from running any of these games, but Valve has now added in advanced settings which allow you to set a global limit on framerates, TDP, and GPU clock speed. Lurking in there is also a setting which allows you to add AMD's FidelityFX Super Resolution to any game running on the device. That's an incredibly powerful feature which has the dual benefit of improving both performance *and* battery life.

With these settings in tow, set to a stable 45fps, I'm now seeing battery life going into the three hour mark and beyond, with *Football Manager* hitting a pleasing five. Messing around in *FTL* and *Starbound*, maybe I might even be able to get close to the mythical eight hours Valve originally promised.

Throw an external battery pack into your bag and there's a transatlantic flight's worth of high-end PC gaming in the Steam Deck.

FAR LEFT: Even if a game isn't 'verified' with the Steam Deck most games we tried mostly worked. Mostly.

BELOW: The library screen is your classic Steam library plus a list of the titles that are 'Great on Deck'.

Sorry, what?

Failing the significant other test

Thermals

Thanks to the AMD Aerith chip's sustained performance the chip does get warm. In-game I was regularly seeing the Deck's silicon, both CPU and GPU components, hitting around 77 to 83°C. That's well within the capabilities of the system's cooling, and won't have an impact on the lifespan of the device, but it's not quiet.

Hot stuff

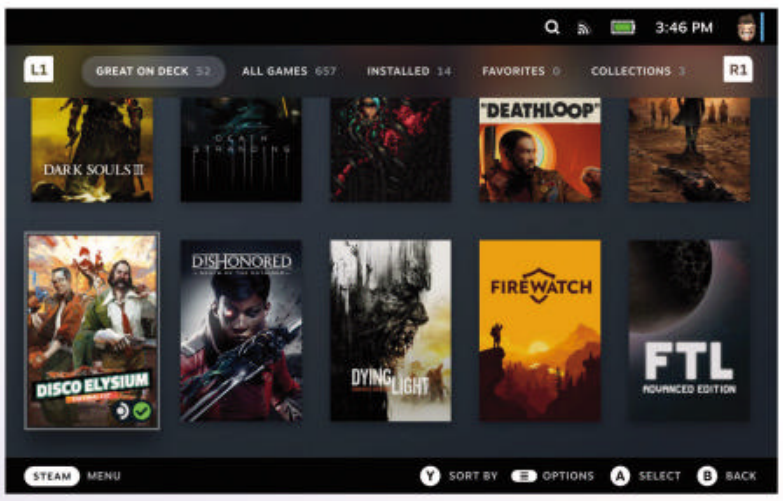
Thankfully, because of the Deck's chonk design, you're not going to get scorched hands playing at that temperature for any length of time. The ergonomic grips on either side of the device blessedly never get hot, and the main vents pushes hot air out of the top of the chassis, and away from you.

Decibels

Sadly PCPP Towers does not afford us a soundproof room in which to carry out proper acoustic testing, but sitting zen-like in a small silent space in my house I was able to measure the sound of the Deck during gameplay. And 48 to 50dB means it's very much a noticeable noise when the fans are going. Which is most of the time.

Pitch

The actual noise itself isn't the big issue, however. The thing which really grates is the pitch of that fan noise. There is a notable whine to the sound and that will grind on you over a lengthy play session – it certainly did for my wife as I was playing *Forza Horizon 5* on the sofa one evening.



I'VE PLAYED RESIDENT EVIL VILLAGE ON THE BUS INTO THE PCPP OFFICE, THEN PLUGGED THE DECK INTO MY MONITOR

Deck Tech

Could it replace your PC?

By Dave James

Plug and play

1 Plug the Deck into a dock, connect a keyboard, mouse, and monitor, and you've got yourself a whole gaming rig ready to roll. You can go with the standard SteamOS UI, like a modded version of Big Picture Mode, but there is also a desktop mode. This operates like a normal Linux desktop, and functions a lot like the Windows OS you're used to. USB devices are plug and play, and most of your favourite apps can be loaded from its Discover software centre. The only issue I've had so far is lack of DisplayPort support and a complete refusal to output at the 21:9 ratio of my ultrawide monitor.

Office-ready

2 I've played *Resident Evil Village* on the bus into the PCPP office, then plugged the Deck into my monitor at my desk and started work. In fact, I'm writing this copy on a wee TKL gaming keyboard plugged into my Deck, listening to Spotify playing in the background on the desktop through my wireless Razer gaming headset. And, with so many of our productivity tasks bound to online portals, such as Google Docs, who needs Word these days? It's genuinely impressive that I can do my entire job on the Deck, from writing, to CMSing copy, firing emails off into the ether, and editing images on GIMP, it's all just a dock away.

Stream Deck

3 The top machine only comes with 512GB of storage, but with the latent game streaming potential of the device that becomes less of an issue with a solid internet connection. It also means only good things for extending your battery life. Steam's Remote Play means you can stream games from your more powerful desktop rig should you wish, and with Chrome installed on the desktop UI you have instant access to GeForce Now. So yes, you *can* play *Fortnite* on the Steam Deck, and any number of other high-end games at blistering framerates via Nvidia's streaming setup. Sadly only with keyboard and mouse right now, as the controller isn't recognised by Chrome.

Costcutters

4 With the Index, Valve went for the biggest, baddest VR headset it could make, but the Deck sees Gabe's gang taking a different tack. This is affordable computing in a world where such a thing seems to have taken a back seat. And don't think about this as just a handheld gaming device either, this is a full budget gaming PC. Handheld gaming PCs often cost well in excess of $2,000, and the fact the mid-tier Deck is less than half that shows where Valve's priorities lie with this device. If you want a versatile, affordable gaming PC, and can't face the costs of desktop GPUs or gaming laptops, then the Steam Deck is an incredibly tempting, cost-effective alternative.

Wes Fenlon

PC PowerPlay VERDICT

The more I use the Steam Deck, the more I marvel at all the pieces Valve had to perfectly align to pull this off. The UI is intuitive. Steam's controller configurator is so clutch, simulating the mouse in an emulator or letting me pick a perfect community-made profile for a kb/m game. Games mostly just... work! I'm fantasising about a v2 that's an inch narrower and 25% lighter – the Deck really is a chunky lad – but it's still sinking in that this is a proper PC that's as easy to use as it is powerful.

Dave James

PC PowerPlay VERDICT

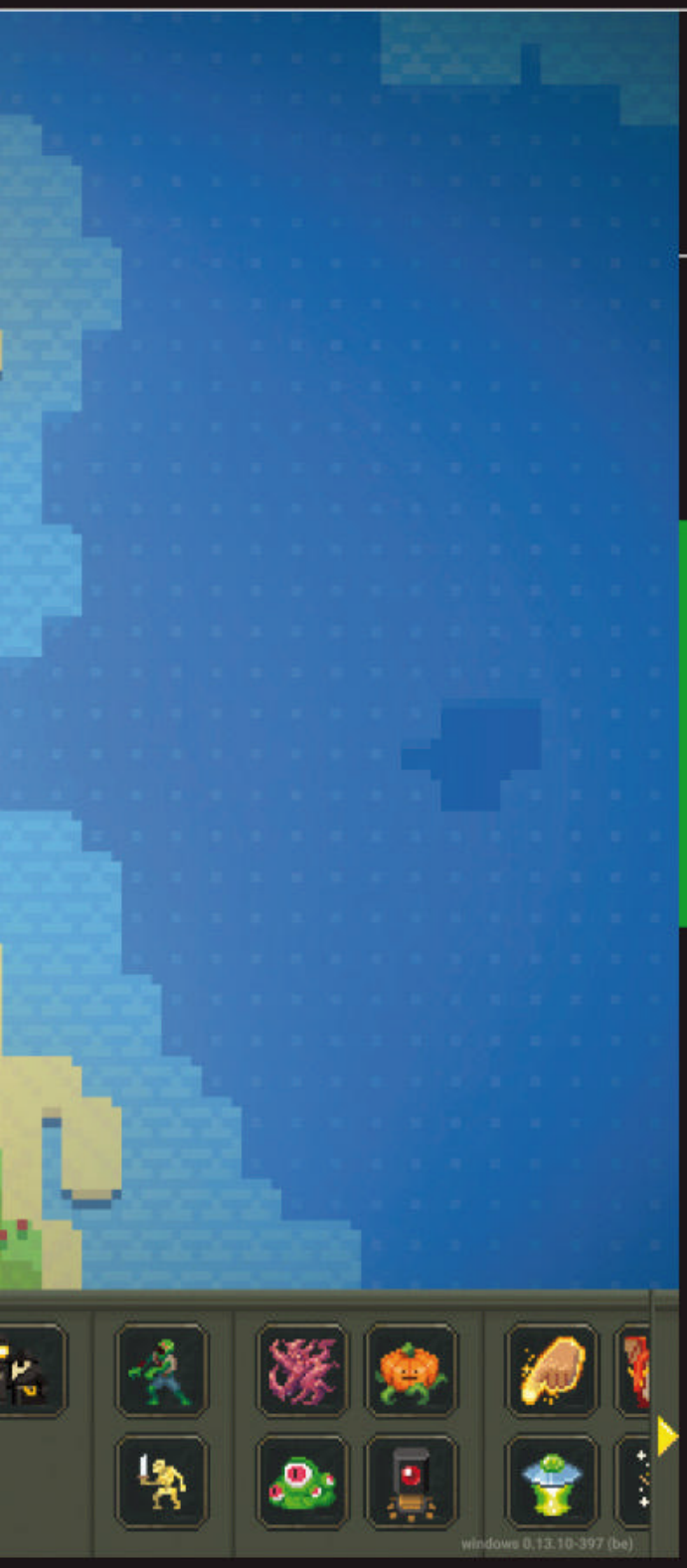
The performance of the Steam Deck *is* a marvel, but the fact you have to tweak settings to get the system and your games running right means any hope of it delivering a simple console-like experience are long gone. I mean, it will just work, it just won't work well. Or have anything like a functional battery life if you don't dig around in those advanced Deck settings. But I also can't forget that price, and that any other equivalent handheld PC I've ever toyed with has the same struggles, and costs three times as much.

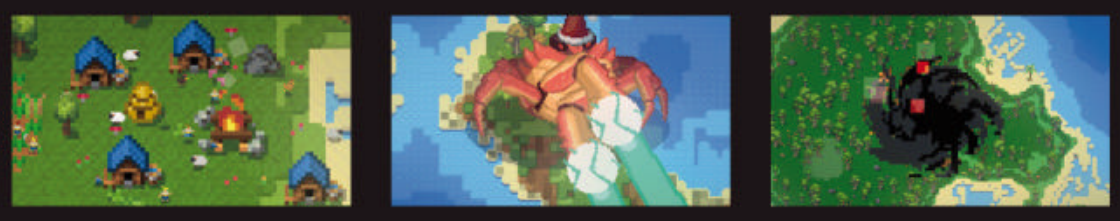
WorldBox – God Simulator

ABOVE: Oh dear, there appears to be a fiery demon on the loose.

RIGHT: The default island is a good place to start, just watch out for the volcano.

FAR RIGHT: The stats on every individual pull you into the game.





NEED TO KNOW

EXPECT TO PAY	DEVELOPER	PUBLISHER	LINK
$28.95	Maxim Karpenko	In-house	superworldbox.com

WORLDBOX – GOD SIMULATOR

Spooky action at a distance

The subject of the names sheep give themselves is not one that has often troubled the minds of PCPP, but it turns out some sheep are called Bah. Others Byyh. Still more take the name Boh, or even Baah. And don't get us started on the chickens.

Then there are the humans. Meet Vuk, who is 27 years old and has seven children. Vuk is a member of the Ulygash Hegemony, and lives in its capital of Ashombe (current size: one hut). It's all been generated by the game since Vuk was placed, with some sheep, chickens, and two other humans, around a beehive in the centre of an island. They were then left to get on with it, the expectation being that, humans being humans, a large honey-glazed barbecue would break out.

WorldBox likes to surprise you, and these humans prefer berries and tea to wings and ribs. The animals are also outbreeding the humans, despite Vuk's heroic efforts, so some wolves might have to be introduced for population control. What could go wrong with that? Humans are rather better at building huts, mining, and cutting down trees, however, and soon a civilisation begins to come together. The low-res pixel graphics give a basic idea of what's happening, but clicking on an individual gives you a load of stats on how they're feeling, their age, their name (it's hard to tell individuals apart, though a map filter will show you the leaders), and which kingdom they're part of. Villages and whole civilisations have these stats too, rulers are born and age, and wars break out.

That's not the only way your pets can die, however. The odds are stacked against Vuk and Bah, as rather than the interventionist god of *Populous*, the player's role here is as a hands-off deity. *WorldBox* is marketed as a 'god simulator' rather than a 'god game' for a reason: you have little control over the creatures you place other than influencing their mood, cursing, or healing them, and there's not much actual 'game', no objectives or enemies other than those you create yourself.

THERE'S A FULL FANTASY TRILOGY OF ORCS, DWARFS AND ELVES ON OFFER

DIVINE WRATH

The godly powers at your disposal also offer much more destructive potential than creative: sure, you can skip through the meadows sowing berry bushes, or you can unleash demons, zombies, nukes, dragons, volcanoes, houses with legs (one day we'll tell the tale of Hamo, the house that killed eight buffalo), acid rain, evil wizards, rhinos, a single enormous crab... there's even space for more things to be added to this panoply of pandemonium.

PLAYED IT

There's a full fantasy trilogy of orcs, dwarfs, and elves on offer, some of whom dislike each other, and they'll all build societies if left long enough. Eventually, roads snake between destinations, fires burn among the forests, humans cut down trees to clear land while elves build tents among the branches. High-ranking leaders are kitted out with legendary weapons, and you can see the number of kills they've made in wars.

There are several options at this point. I can raise a land bridge to close the watery gap between humans and elves, to see how the inevitable war plays out, or I can unleash a dragon or zombie apocalypse, or I can spin up a new set of islands, populate them, and see how these develop differently from the first.

WorldBox's graphical style might take a bit of getting used to in these days of 4K and ray tracing, but as a sandbox filled with ants for you to nurture, feed, terrorise, and burn as you see fit it has a lot of potential for entertainment. And the dogs? Dogs are called Waaf.

Ian Evenden

DOWN THE RABBIT HOLE

The last remaining **MATRIX ONLINE** fans can't wait for the renaissance

By Luke Winkie

The faint remnants of *The Matrix Online* still radiate somewhere in the ether. I'm not saying it's possible to jack in, but... well, do some Googling and you may or may not find a website dedicated to emulating this beloved, doomed MMO long after its funeral. You may or may not uncover a hyperlink that downloads a preserved version of the game client and a crack designed to jailbreak it from Sony's rigor mortis grasp. You may or may not be asked to fabricate login credentials, and you may or may not watch your computer seize up as it attempts to render assets that have been left to atrophy since 2009. But if you follow the white rabbit far enough – if you take the red pill and slink past the mouldering firewalls like the brave pirates of the Nebuchadnezzar once did – you will eventually find those abandoned greyscale buildings, that queasy smog-stained sky, and a deep, permeating sense of loss. *The Matrix Online* shambles on, creaky but undeterred.

It will not take long for you to understand that *The Matrix Online* has grown shrivelled and desiccated in its afterlife. The game was released in 2005, and Sega pulled the plug just four years later. *The Matrix Online*'s emulation project – the only way to play the game in 2022 – was pieced together by a hacker named Rajko through reams of server code he scraped together as the game entered its hospice period. Rajko has toiled for 12 years as the MMO's personal curator, and as I write the emulation resembles more of a zombie than a messiah. A huge swathe of content is missing, and will likely never be recovered. The project is not capable of providing combat, quests, character progression, or many of the gameplay elements that a nation of redpills once enjoyed.

And yet, against all odds, *The Matrix Online* keeps on finding new ways to stubbornly survive. For those who grew up adoring this game and the greater Matrix mythos, that's more than enough.

A CLASSIC IN STASIS

"You [use the emulation] to chat, explore, equip clothing and weapons, and emote," says Bitbomb, one of the many denizens of a Discord server

dedicated to the ongoing resuscitation of the Matrix MMO. "Most recently, your character can finally sit on things. That didn't work for the longest time."

The Matrix Online deserved better. Hell, The Matrix itself deserved better. All the pieces were in place. The Watchowski sisters pioneered a dense fiction perfectly tuned for an ascendent generation of technophiles: a filthy dystopia embellished with snakeskin trench coats and mirrored sunglasses. They used Hollywood to realise a generation's worth of latent cyberpunk wish-fulfilment. The franchise was downright monolithic for a few years, the first film scooping up nearly $500 million at the box office and earning a quartet of Oscars at the Academy Awards. Neo, Trinity and Morpheus were consecrated into a new pantheon of superheroes long before the Marvel revolution.

If you asked me what I thought the future held in 1999, I'd tell you that it seemed inevitable that The Matrix would continue to cultivate its multiversal empire with a litany of sequels, TV shows, comic books and videogames, securing its place as an omnivorous media juggernaut. *The Matrix Online* was supposed to be the capstone of that promise; a persistent metaverse in which the saga could grow, twist and iterate forever. The Wachowskis named the MMO as the canonical successor to the trilogy, so for a crop of newly-minted fans captivated by transhuman potential, a subscription was a no brainer.

A PERSISTENT METAVERSE IN WHICH THE SAGA COULD GROW

AFTERLIFE

But you probably know the story from here. The Matrix's two muddled sequels lacked the watershed, mind-bending clarity that elevated the original, and by 2005, the franchise's zeitgeist had thoroughly passed through the nervous system of American society, leaving only a chittering niche of diehards behind.

System / Area
Your last session was terminated using the /jackout command or by an unexpected disconnect. You have bypassed the loading area and been placed in the Matrix at your last known location.
Area>

ABOVE: Some of the game's skylines are still evocative all these years later.

FAR LEFT: Getting redpilled.

Jacking in.

The Matrix Online earned middling reviews and a small, negligible playerbase upon release, and when it was mercifully snuffed out of existence, nobody really seemed to notice. But the passage of time has been kind to the pop relics of the early 2000s and, right now, we are once again living through a hot flash of Matrix mania. The fourth film in the series – The Matrix Resurrections – is hgoing down a storm thanks to its Covid-mandated home streaming release, and rumours of a fifth entry are already being strenuously denied.

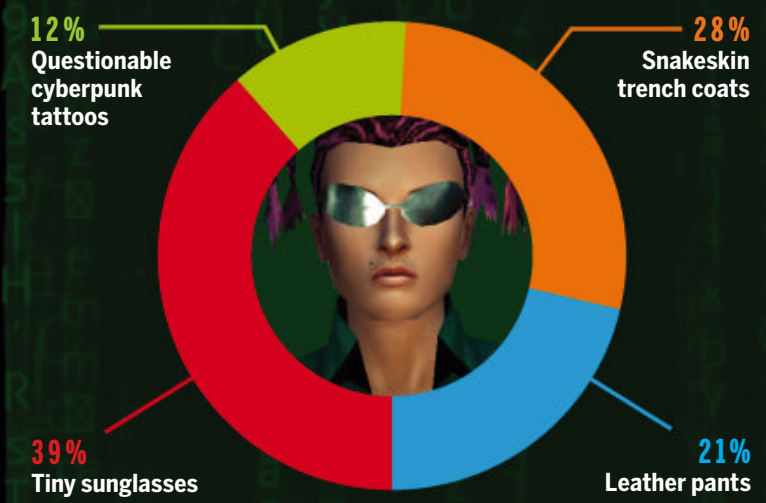
Those who adored this misadventurous MMO did not need a renaissance to reignite their love, but when I hit the dirty avenues of the emulation myself, I caught a few other newbies hiding out in the chat box, probing the ancient DNA of our once-and-future blockbuster. They, like me, caught the fever again. The Matrix has us, same as it ever was.

Nobody, not even the most ardent *Matrix Online* defenders, wants to argue that the game was unfairly treated by critics. "The flaws were numerous," says Vesuvius, another Discord member who was perhaps the most effusive about the MMO's legacy during my interviews. "The combat [was unbalanced,] there were bugs, exploits, and a PvP system with no reward other than bragging rights." All of those problems eventually proved untenable. The MMO held under 500 active players by the time it was shuttered, which is about as grim as a server population can get.

But Vesuvius believes that there are certain elements of *The Matrix Online* experience that haven't been replicated before or since by any of the major players in the game industry. In particular, he points to the game's Live Events Team, which was composed of genuine Sony developers who would take control of important lore characters – think Morpheus or Seraph – and act out a crucial junction of the narrative in real time. The idea of a studio reaching through the looking glass and manipulating the contours of the Matrix without any scripting or artifice is so perfect I can't believe it didn't make a bigger splash. When I was hearing the same canned dialogue in *WoW*'s *Stormwind* over and over again, *The Matrix Online* was experimenting with spontaneous public theatre – a cavalcade of players chasing Niobe

CYBER DNA

Feeling lucky, punk?



through the corridors, desperate to eavesdrop on any juicy intel. That is a bold bit of game design; maybe we really were missing out. "The [live events] were unannounced, spontaneous, secretive," says Vesuvius. "Even if an event took place on your server for your organisation, there was no guarantee you could participate. Screenshots of events were posted to forums the following day. They were often the best way to stay up to date."

THE RED PILL

Other players I spoke to extolled the flexibility of *The Matrix Online*'s talent tree – another element of the game that is sadly impossible to resuscitate in the emulation. "We could swap out our abilities whenever we wanted. In other MMOs when you chose your role you had to stick to it, but I loved the freedom to change my loadout when it suited me," says Dan, who tells me he started playing the game when he was 14 years old. Given how the rest of the RPG landscape has slowly sanded down the hegemony of the Almighty Spec, perhaps Dan is right when he says that *The Matrix Online* was ahead of its time.

By and large though, these wayward fans are most fond of the way this MMO told its story. *The Matrix Online* was religious about its plot; dispensing frequent cinematics and universe-altering 'critical missions' that slowly unfurled what life was like after Neo. In 2005, as it became clear that there was no more Matrix fiction on the horizon, this videogame was the only way to get a taste of that endlessly cascading code.

The Matrix Extended Universe goes places, and these players savoured it to the last drop. "Niobe revealed her true feelings for Neo. Ghost resisted temptation and corruption at the hands of a sexy machine liaison designed to appeal to humans. As the Oracle hinted, he went on to lead the charge

CLASS ACTS

Our favourite character archetypes offered in the game

- Devoted Ascetic – Aren't we all?
- Fanatic Self Improver – Hustle culture, baby.
- Suspicious Cynic – Also known as, 'games journalist'.
- Detached Spectator – The Keanu Reeves of character tropes.
- Troubled Intellectual – Sure, let's call it that.

absent of Neo and Morpheus," says Vesuvius. "The lore was always the heart of the game."

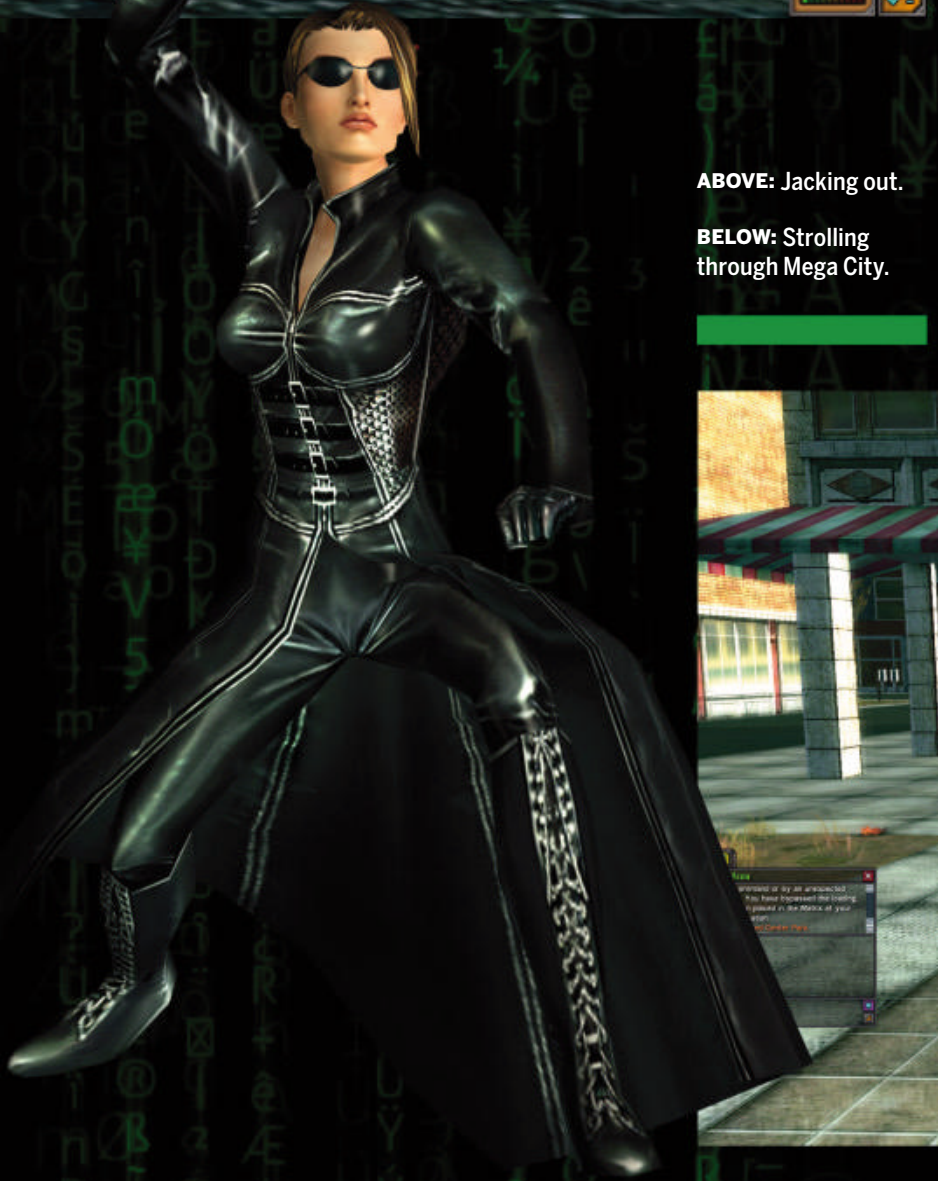
RESURRECTION

Neo is a myth in The Matrix Resurrections, reinserted into the overly complex power-generating apparatus as a game developer making something not a million miles away from *The Matrix Online*. And while I love the idea of the band getting back together – Keanu Reeves, Carrie-Anne Moss, Jada Pinkett Smith – for an Endgame-style supergroup bonanza that still honours the scaffolding laid out by an old, dead MMO, it's the original 1999 movie that is most referenced. After the franchise's long, circuitous trip back to the pinnacle of pop culture, it would be almost fitting to have seen cutscene compilations from the game instead.

Vesuvius says that he desperately hoped the MMO would remain canonically enshrined in the new movie, but others have made peace with the Wachowskis pressing the reset button. "A reboot could be supremely inventive. I feel like I would be experiencing it with the same folks I did way back when," says a *Matrix Online* lifer who goes by Sugaree. "The deepest feeling of satisfaction I got came from socialising. I'm not afraid of a reboot."

"THE LORE WAS ALWAYS THE HEART OF THE GAME"

Regardless of what comes next, *The Matrix Online* will never flicker out for good. The game is enfeebled – a shell of itself – but it persists because the memories have never grown stale. Take a walk in the uncanny metroplex of Mega City, close your eyes, and be whisked away to an era where these streets were packed with kung-fu fights, leather dusters, and smoked ammunition. A crack of light is pouring into this tomb as The Matrix stirs once more. At last, after more than a decade of undeath, there is finally hope on the horizon. ■



ABOVE: Jacking out.

BELOW: Strolling through Mega City.

PC'S NEW GOLDEN AGE

There's never been a better time to be a PC gamer – and the future is bright

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Hardware
Games on TV
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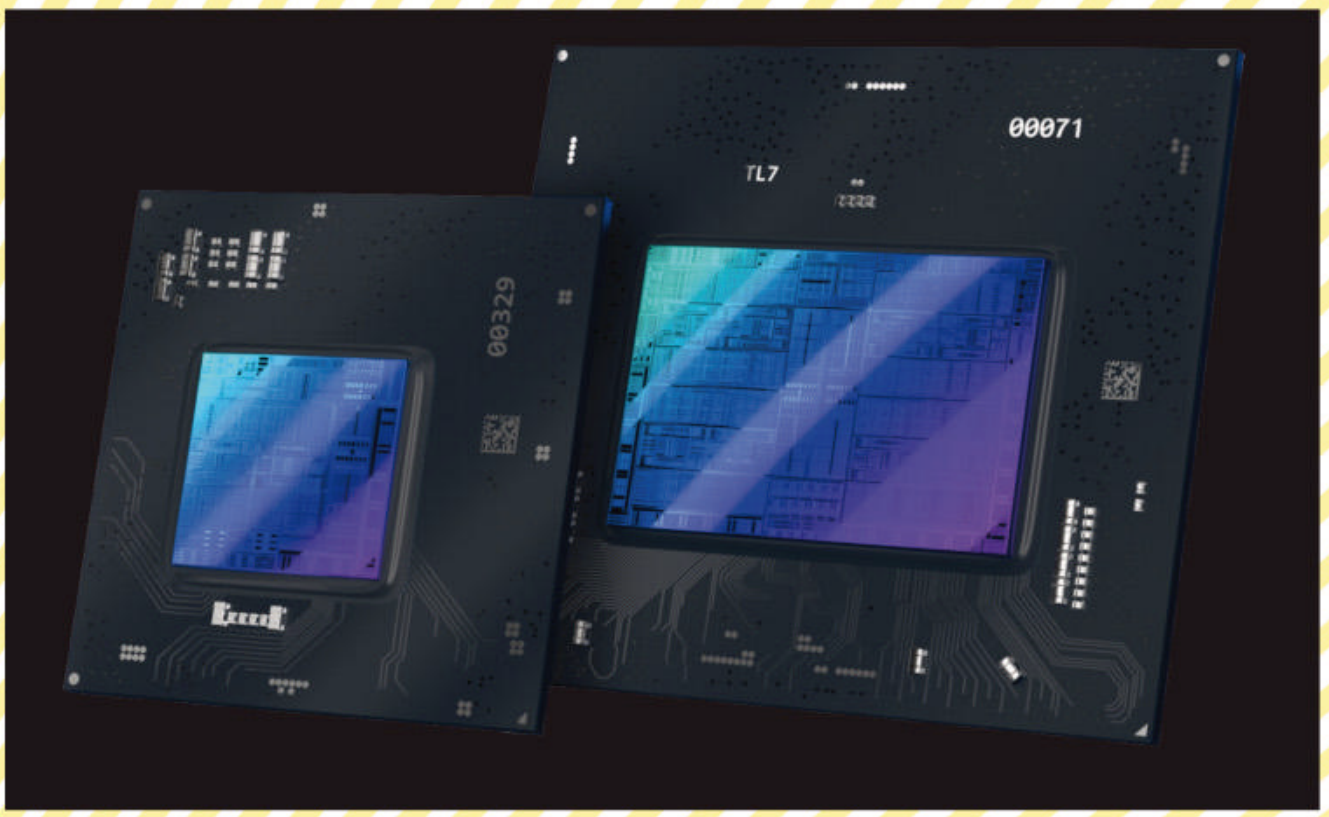


RISE OF THE MACHINES

The world of **PC GAMING** is more alive than ever – with plenty to look forward to. *By Wes Fenlon*

In September 2011 I moved 2,500 miles from one side of the country to the other, leaving behind friends and family for a city where I knew almost no one. For some of those relationships the move meant a huge change: I went from seeing friends weekly to just once or twice a year. But for others it was an easy transition, because we already spent most of our social time playing games together online.

In 2011 if we were conscious and not stuck at work, we were mainlining *League of Legends* like droogs with our eyes wired open. We later had trysts with *Battlefield 3*, *Terraria*, *Smite* and *Dungeon Defenders*, all games we could pay just enough attention to, to keep our main focus on why we were ultimately playing together: to chat about day-to-day life on our homespun Mumble server.

We never lost touch or stopped playing games, but it became harder and harder to line up our schedules, especially with two time zones in between us. Then 2020 hit, and for the first time in almost a decade my PC gaming group was essentially my entire social life again. It's been a hard two years in so many ways, but our Discord server has been a daily comfort – a place to vent, cope, and pass the time with videogames. The pandemic has certainly taken a toll on PC gaming, delaying countless games and smashing hardware supply chains to pieces. But it's also reinforced for me what an incredible place PC gaming is in now compared to ten years ago.

THE LONG ERA OF CONSOLE EXCLUSIVES IS ENDING

THE NUCLEUS

Sony and Microsoft might still be slugging it out for a spot in the entertainment centre, but both have admitted the PC is too big to ignore. The long era of console exclusives is ending, with virtually everything now arriving on PC – and usually in finer form. We can play *Halo* on Steam without being tortured by Games For Windows Live, and Sony's crown jewels like *God of War* are getting PC ports with luxurious ultrawide and DLSS support for added shine.

Nowhere but the bizarre melting pot that is the PC could games like *Among Us* or *Project Zomboid* lurk for years before suddenly surging in popularity. The PC is now the nucleus of gaming culture, ground zero for new trends, home to Discord and Twitch and every esport outside of the fighting game community (maybe with *Street Fighter VI* they'll

Once-dead genres – like the 3D platformer – have returned on PC.

find the allure of 240Hz monitors irresistible). And the future looks brighter still.

2022 is poised to give us the Steam Deck, an affordable entry point to PC gaming that has the potential to open up our hobby to millions more people. We're still grappling with those hardware shortages, but they haven't slowed down PC tech's current hot streak, with Intel pushing a groundbreaking new desktop architecture, AMD killing it on performance with each new generation, and Nvidia pairing its graphics cards with irresistible software features like AI supersampling. Even if you can't get your hands on new gear, the most exciting innovations in the PC space right now are helping games run better on the hardware you've already got.

PLAY THE HITS

When I think back to what kinds of games I could play on PC in 2011, 2022 feels like an outright fantasy. *Elden Ring*, quite possibly the biggest game of the year, launches on PC day one, while a decade ago Japanese PC ports were rare, late and usually terrible to boot. For years console players lamented how 3D platformers had died off in the third-person shooter era, but there are a wealth of them on PC, like last year's beloved *Psychonauts 2* and even a reverse-engineered PC port of *Super Mario 64* (seriously, is there anything diehard PC modders can't do?).

For most of the last decade it also felt like the quintessential PC genre – real-time strategy – was on life support, but 2022 bodes well there too. We ended last year with *Age of Empires IV* and now wait impatiently for *Company of Heroes 3*, which feels

TOP: What exciting new treat at the *Into the Breach* devs working on?

ABOVE: Once a console mascot, Master Chief is now very at home on PC.

ALIVE AND KICKING

Remember when PC gaming died? We don't either, but people sure liked to say it was happening

2012
Mistranslations for the Modern Gamer writes: "The most recent blow is the announcement that *Diablo 3* will be released on consoles... What *Diablo*'s console debut means is that its developer, Blizzard, has left PC exclusivity, and that, internet, is a monumental blow." Nah, it wasn't.

2015
Wired writes: "No, Really, the PC Is Dying and It's Not Coming Back," after fewer PCs are predicted to ship that year, and Apple sells loads of iPhones. Hundreds of millions of PCs continued to sell every year, and sales even increased year-over-year in 2019. Turns out people like both computers and phones.

2019
Marketwatch writes: "PC gaming is in a decline," arguing that PC games aren't good anymore, unlike old Amiga games that "had only one goal: to entertain". And yet PC gaming is more diverse today than ever. The best part of this argument was the final line, "Hang in there. Cyberpunk 2077 is just around the corner." Yikes.

like the kind of one-two punch that could wake up everyone who's slept on the RTS for far too long.

Hell, even *STALKER* is getting a sequel we never thought we'd see this year (it was supposed to be out in April, but slipped to a hopefully final December 8). 2022 is going to be a tsunami of a year, with waves of pent-up games delayed in 2020 and 2021 finally making it out. It's going to be a marathon from *Elden Ring* in February to *Starfield* in November, assuming Bethesda sticks to its release date. And if Team Cherry hasn't finished *Hollow Knight: Silksong* by the end of 2022 I'm moving house again and standing outside their window with a boombox until they let me play it.

The stacked calendar we're looking at now at the year's beginning is still an incomplete picture, admittedly, with little indication of what will blow up, what will fizzle, and what isn't even a blip on our radar. It's hard to keep perspective on how sprawling PC gaming is now: back in 2011, roughly 300 games came out on Steam in the whole year. In 2021, there were around 12,000. A pile that big is bound to contain a few big and exciting surprises.

TOP: Is a *God Hand* PC port really too much to ask for?

ABOVE: We reckon we'll finally get *Silksong* this year.

BETTING'S OPEN

BioWare has been playing coy about its next *Mass Effect* and *Dragon Age*, but it seems certain both are coming. The long-awaited *BioShock* successor will likely come up for air this year. Rockstar, meanwhile, is almost surely working on *Grand Theft Auto VI*, and 2023 will mark a decade since the release of *GTA V*. I'd put $10 down in a Miami casino that *Vice City*'s coming back next year.

Those multimillion dollar productions live side-by-side on Steam with indie games, and today's indie development scene is so absurdly flush with talent that even a quiet week for games hides something tantalising. What are our favourite indie teams working on right now? Zachtronics bends our brains with a new puzzle game virtually every year. Our 2018 Game of the Year *Into the Breach*, from indie developer Subset Games, is now four years old, while Supergiant Games' acclaimed *Hades* will turn two before 2022 is over. The next year or so seems like the time for both to unveil something new.

And with Sony now gung-ho about PC ports and Sega slowly coaxing its RPG studio Atlus into embracing the PC, we may even cross some more names off the list of holy grail ports. If we all do our Hail Marys before bed every night, dare we hope for a *Bloodborne* or *Persona* 5-shaped miracle? If I were truly honest I'd tell you that the port I want to see most is a remaster of Capcom's *God Hand*, but some dreams are just too outrageous to commit to print.

BIOWARE HAS BEEN PLAYING COY ABOUT ITS NEXT MASS EFFECT

LET'S JAM

I hope 2022 sees Covid-19 wane and gives me the chance to step away from my PC more, but for now I'm content playing through *Gloomhaven* with the same friends I rolled into *League* with. Our reflexes and schedules couldn't survive in a MOBA these days, but the digital version of a phenomenal board game? That we can handle. ■

THE LINE-UP

It's set to be a fantastic year for releases – here's just a few of the heaviest hitters

Company of Heroes 3

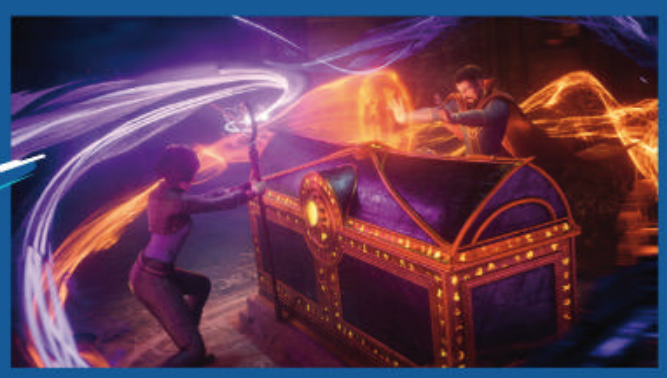
RELEASE: 2022

2022 is the year the RTS returns from the grave, as genre veterans Relic Entertainment bring back the iconic WWII series. We've been hands-on a couple of times now, and it's blown us away each time. It's a good year to be a strategy gamer.

Starfield

RELEASE: Nov 11, 2022

It's been a decade since *Skyrim* and seven years since *Fallout 4*. In other words, it's been a long wait for a new Bethesda open world, but 2022 is finally the year – and with its intergalactic setting, it looks like the developer's most ambitious project yet.



Marvel's Midnight Suns

RELEASE: 2022

You know it's going to be a good year for PC gaming when there's a big new release on the way from the *XCOM* team. *Midnight Suns* may be taking the strategy in a very different direction, but its superheroic skirmishes look no less compelling than the alien assassination we're used to.

Warhammer 40,000: Darktide

RELEASE: 2022

After years of lovingly supporting the excellent *Vermintide 2*, Fatshark is gearing up to launch its grand follow-up. Bigger, bolder, and bloodier, with a shift in setting to the grim sci-fi of Warhammer 40k, it promises to make this a year a great one for co-op action.

Stray

RELEASE: Autumn 2022

The debut game from two ex-Ubisoft veterans promises a unique experience where you play as a cat in a sci-fi world.

Total War: Warhammer III

RELEASE: Out now

It's almost time for the biggest entry yet in one of the best strategy series of all time. Find out more on p28.

STALKER 2

RELEASE: Dec 8, 2022

For a long time it looked like we'd never get a new *STALKER* – but this year we're getting a sequel in time for Christmas.

Homeworld 3

RELEASE: Summer 2022

Nearly two decades after *Homeworld 2*, Blackbird Interactive is bringing us back to a galaxy of spaceship strategy.

Baldur's Gate III

RELEASE: TBC

Larian's fantastic take on the series is already out in Early Access and we're hoping this is the year it goes 1.0.

Suicide Squad: Kill the Justice League

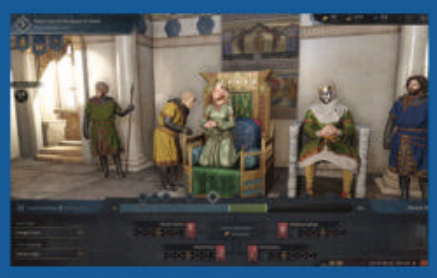
RELEASE: 2022

The creators of the *Batman: Arkham* games are back in the superhero saddle.

Kerbal Space Program 2

RELEASE: 2022

Getting to the moon first time round was hard enough – now they want us to build entire colonies in space!



Crusader Kings III: Royal Court

RELEASE: Out now

This first big expansion will be the perfect excuse to return to *CK III*.

PC IN YOUR PALMS

The **STEAM DECK** could totally change how we play in 2022. *By Wes Fenlon*

Apple isn't a bajillion-dollar tech juggernaut today because it comes up with ideas first. Apple didn't invent the MP3 player, but the iPod dominated because it had a better design, better aesthetics, and better ads. Apple didn't invent the smartphone, but the iPhone crushed its nascent competitors with better hardware and a brilliant touch interface. Being first never mattered as much as flexing those brand and design muscles to make everyone else look old and busted.

I think that Valve has a shot at its own iPod moment in 2022. The Steam Deck isn't the first portable gaming PC, but it might be the one that changes everything.

The pieces for a sea change moment for the PC, specifically, are all aligned this year. The Steam Deck isn't just a promising piece of hardware. It's also coming out at an opportune time when PC gaming is out of reach for many people.

The brand power is definitely there: Steam saved PC games from languishing in the dreary dishevelled aisles of Walmarts and Best Buys, becoming the platform that even Microsoft and Sony use to publish their own PC games. The PC already won the console war, so why not go all the way and make the PC a console? It's been tried before, but never by a company with Valve's resources or name recognition.

I THINK THAT VALVE HAS A SHOT AT ITS OWN IPOD MOMENT IN 2022

PICKING UP STEAM

Up to this point, handheld gaming PCs like the GPD Win have tried to shrink the laptop experience down to something more pocket-sized, but it's never been an ideal setup. Windows isn't built for those tiny screens; the performance overhead sucks for portable systems where every ounce of power matters; and who really wants to use Windows on a gaming system that's supposed to be pick-up-and-play simple, anyway? Getting games working on these devices has long been an arcane process of sussing out driver and compatibility issues.

Valve's near-monopoly over game distribution has put it in a good position to stamp out most of that fiddling. With Linux, Valve can erase the most obvious drawbacks of playing PC games on an OS that was never built to be portable. On the Steam Deck there's no Windows bloat, no wrestling with an awkward interface. If Proton – the tool Valve developed to convert Windows games to Linux on the fly – works as seamlessly as promised, less tech-savvy gamers won't even notice it. They'll just turn on the Steam Deck and play games. To them, the Deck won't be running on Linux. It'll just be running Steam.

That convenience is the key thing handheld gaming PCs have been missing until this point. And convenience shouldn't be underestimated. When Nintendo released the Switch, it managed to draw people away from the places they were already playing games. Many PC gamers knew they could get a game cheaper on Steam, but opted to buy and play it on the Switch instead for the portability. Some games just felt right on the Switch's screen, played propped up in bed or on the go. The Switch was an ideal companion for a gaming PC, but now the Steam Deck can fill that role.

In one sense Valve is selling the Steam Deck at a difficult time – global hardware shortages already forced Valve to push the launch back by a few months, while graphics cards and some other components remain in critically short supply. 2021 was a bad year for PC gaming hardware. But the continued shortages could also end up being an opportunity. A £349 Steam Deck looks pretty good next to an £700 RTX 3060 someone's trying to flip on Ebay. Preordering the Steam Deck could mean a long wait, but Valve's Greg Coomer told me in August that, "It's our job to produce units as fast as we can in the highest quantity we can, so a lot of us are working on how we can make more Steam Decks. That has become our focus."

SWITCH OFF

The Steam Deck's biggest audience will still likely be PC gamers who use it as a portable secondary device, as a more convenient way to plow through their backlogs of Steam Sale games away from their desks. But if component shortages stretch on, it may well become a more attractive first or only PC.

And at least in terms of power, it's the Switch Pro many people were hoping to see last year when Nintendo disappointingly just

HANDS-ON

Games we can't wait to play on the go

SLAY THE SPIRE

OK, it's not really testing the limits of the hardware, but the Switch version has already proved that this enduring deckbuilder is the perfect game to dip in and out of on the go.

RED DEAD REDEMPTION 2

There you go, here's a test of the hardware. If the Steam Deck can run *RDR 2* at a decent framerate, it'll be a game-changer – one of PC's biggest, richest open worlds in your pocket.

CRUSADER KINGS III

Will the controls be able to handle *CK III*'s dense UI? That's still in question. What isn't in question is my desire to rule a medieval empire while I wait for the bus.

ABOVE: A lot of questions remain about the final product – but the potential is undeniable.

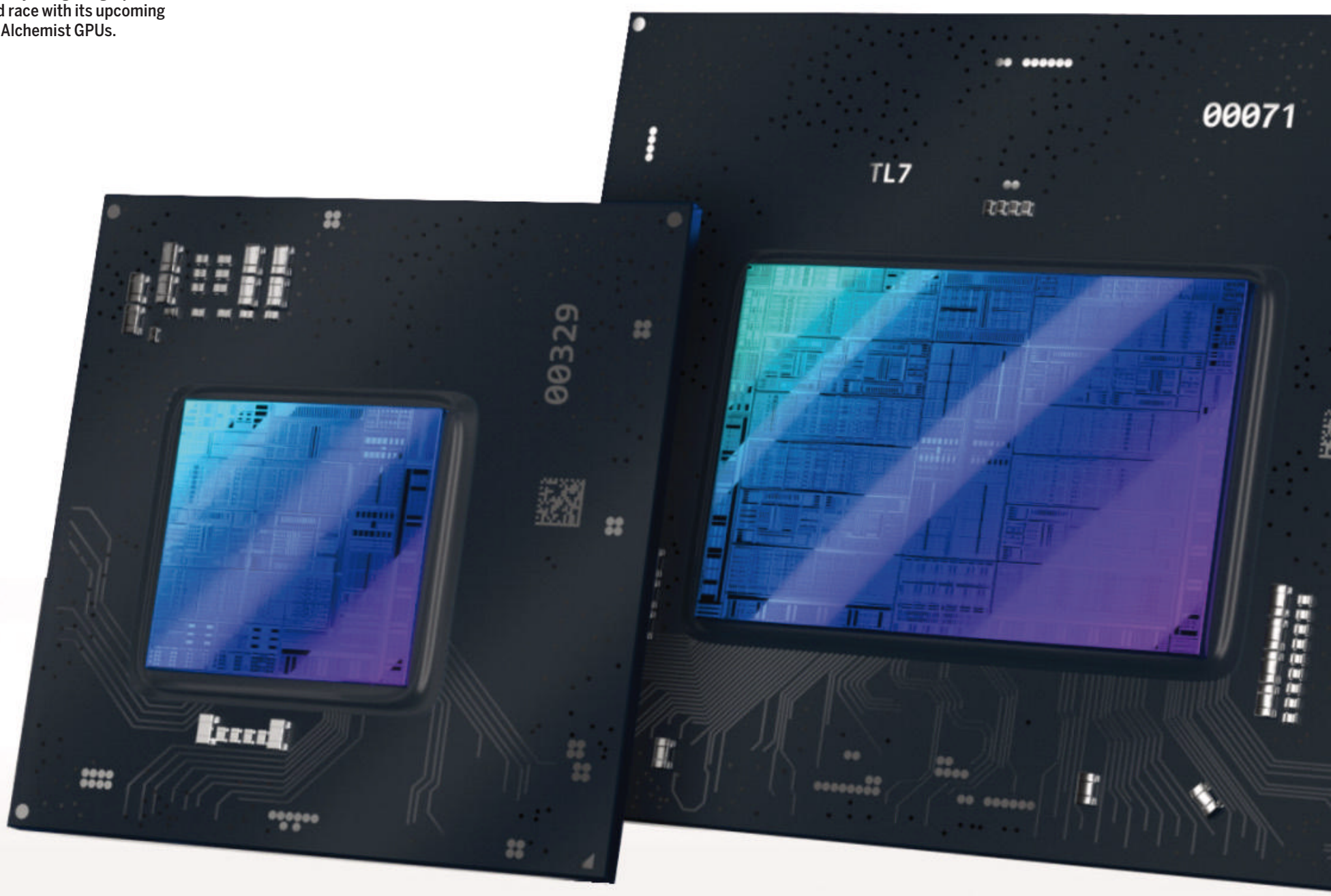
BELOW: An enormous library and cheaper games could be a huge edge over the Switch.

slapped a bigger OLED screen onto the Switch. I'd be silly to suggest the Steam Deck will suddenly outsell the Switch – raw power has never been enough to beat a Nintendo handheld.

Still, the timing is good for the Steam Deck. Outside of Nintendo exclusives, there's barely a distinction between 'console games' and 'PC games' anymore – most games today are released on as many platforms as possible. Steam's gargantuan library includes PC games from 30 years ago and Sony's *God of War* side-by-side. The Switch has primed millions of players to appreciate console-quality games made portable, but many of those games like *Apex Legends* and *Ark: Survival Evolved* now run at such low resolutions or low framerates that they're barely playable. The Switch cannot play big budget games released in 2022 without massive sacrifices. The Steam Deck can.

Maybe I'm overestimating the Steam Deck's chances. Looking back, Valve's previous hardware experiments mostly failed. Valve's play for the living room with Steam Machines was an infamous flop; the Steam Controller never caught on; its VR headsets remain too expensive to approach Oculus's popularity. But none of those devices really had a proven audience eager and waiting for them – or a pitch as strong as playing all your PC games on the go, without the sacrifices of all those previous handheld PCs. And the SteamOS software that held back Steam Machines in 2014 may have matured enough to now be Valve's ace in the hole.

Even if the Steam Deck doesn't shake the foundations of PC gaming enough to pull most PC gamers away from their desktops, a modest success could still be transformative for Valve. There's never been a single device or brand synonymous with PC gaming. The Steam Deck could easily become that: the go-to PC if you want to spend £350 or care about portability, and the first in a product line that could bring more players to Steam. If 2022 is the year of the Steam Deck, then 2023 will be the year we see Valve's dabbling with hardware evolve into its biggest priority. ■



Intel is joining the graphics card race with its upcoming Arc Alchemist GPUs.

WHO NEEDS NEW GPUs?

2022 is the year where you don't need new **HARDWARE** for better gaming performance. *By Dave James*

There are two things we are confident about seeing in 2022. The first is that the silicon shortage will continue well into the end of the year, making graphics cards still the most sought after, most expensive part of any gaming PC build.

That's rather depressing, and I'm sorry to have to kick off the year confirming the ongoing technical torpor of PC gaming hardware. But the second thing we're confident about seeing is far more positive, and means that maybe we shouldn't care about chasing that ephemeral upgrade and love the rig we're with.

Because there are some things happening in 2022 that mean you're likely in line for higher frame rates and improved gaming fidelity from your existing gaming PC without having to change a single chip. A little software update here, a patch there, and you could soon be enjoying better gaming performance for free.

That probably sounds like so much snake oil so far, but if you look back at the recent trends in graphics you can see where 2022 is heading. Sure, we've been talking about the most powerful graphics cards being released over the last couple of years that make the best of the last gen seem laggardly by comparison, but it's the accompanying rise in upscaling software that has arguably been the most impressive improvement of all.

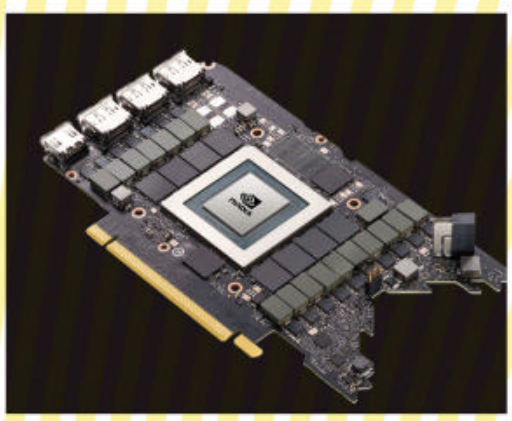
CHIP SHAPE

Nvidia's Deep Learning Super Sampling (DLSS) kicked it all off, using AI and the latent power of its GPU's Tensor Cores to make upscaled, lower resolution images look sometimes even better than at the equivalent native res. The green team has continued improving on the GeForce RTX-only technology, but AMD has not been slacking with its own FidelityFX Super Resolution (FSR) coming, not just to Radeon cards, but to all GPUs. It's not quite as high fidelity, but it will get you great performance without the necessarily muddy visuals of a standard low res game setting.

It still needs to be added on a per-game basis, however, but launching early this year is Radeon Super Resolution (RSR), a feature baked into an upcoming AMD driver release that will deliver all the performance benefits of FSR to "nearly every game you own".

Turn it on in the driver software, lower the resolution in-game, and AMD's smart upscaling will take care of the rest. Though we've no idea how it compares to FSR in terms of fidelity, surely lower, but unlike FSR it is only compatible with the last two RDNA generations of AMD graphics cards, so there might be some other magic going on in there.

However it shakes out you're looking at a free performance



upgrade for your RX 5000-series, or newer, GPU with just a driver update.

Nvidia already has its own Image Sharpening feature that works in a similar way, but is also this year introducing Deep Learning Dynamic Super Resolution (DLDSS) for those happy with their performance, but want higher image quality. It's a downscaler which will take higher res inputs and drop them down to a lower resolution for a sharper, more detailed final result without a performance penalty. Think of it like getting your own remastered version of pretty much any game you apply it to.

CARDS ON THE TABLE

Intel's also getting in on the graphics card game this year, too, and is going to add its own upscaling tech to the party as well. Xe Super Sampling (XeSS) will come in two flavours; one will be hardware agnostic – but will still need dev implementation – while the other will use the AI smarts of its new Alchemist GPUs to deliver DLSS-a-like speed and fidelity improvements.

However good, or not, Intel's first gaming graphics cards turn out to be, we're still going to end up in a position this year where whatever GPU is humming away inside your gaming rig, you'll have your pick of three different upscaling technologies all promising to deliver better performance in the games you already own.

NVIDIA'S DEEP LEARNING SUPER SAMPLING KICKED IT ALL OFF

It's not just the hardware manufacturers looking to improve gaming performance on existing hardware – or maybe looking for some sort of absolution for their combined GPU crisis responsibilities. With Epic's Unreal Engine 5 we're going to be treated with Temporal Super Resolution, an engine-based upscaler, and rumour has it that Microsoft is working on something similar for its consoles, which may end up hitting PC, too.

2022 may just be the year where you don't need to upgrade your graphics card. Luckily. ■

TOP: Nvidia and AMD both came out swinging at this year's CES event.

ABOVE: AMD's FSR doesn't require specific GPU tech to improve gaming performance.

SOFT TOUCH

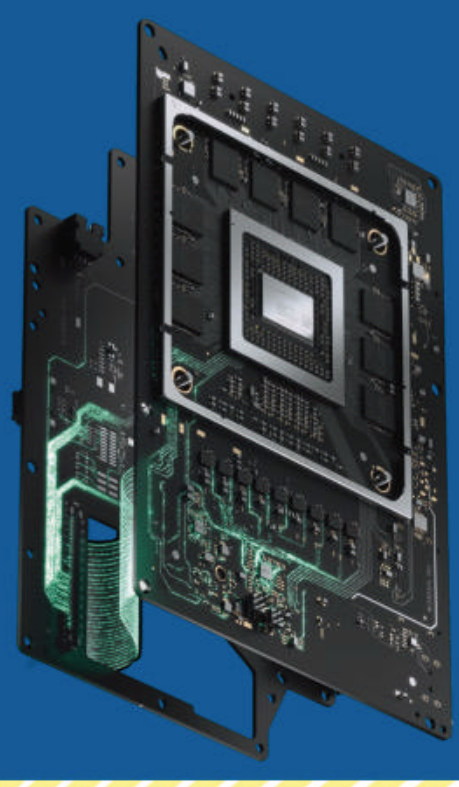
The lowdown on Microsoft DirectStorage

What the hell is it?
A new DirectX API that takes its cues from Microsoft jamming SSDs into its latest console generation to unleash the latent power of solid state storage.

How's it promising to make playing games better?
For modern open world games, with huge vistas and vast maps, streaming all that game data from your SSD into system memory, in and out of the CPU, then into GPU memory takes a huge amount of time and that can hurt frame rates. With DirectStorage, the processor's cut out of the equation entirely, speeding everything up.

Just Windows 11 then, huh?
No, it's rolling out to WIndows 10, too. And will be compatible with either PCIe 3.0 or PCIe 4.0 SSDs as well.

When?
There's no concrete timing yet, but we've heard stories of game devs working with the API already, so we're not expecting it to be far away at all.



SCREEN LIVING

Finally, we live in the age of great **GAMES ON TV**.

By Wes Fenlon

C*astlevania*, the game, started as a pastiche of Universal monster movies, sending an orange guy with a whip to fight a mummy, Frankenstein's monster, and big bad Dracula. Castlevania, the show, spent its fourth season exploring the relationships of a quartet of immortal vampire queens, reflecting on how we process grief, and looking absolutely incredible in motion. I don't think it's an outcome that anyone expected, but seven years after the last (maligned) *Castlevania* game, the Netflix series has become the new benchmark for videogame adaptations.

I can imagine an alternate universe where we never got Netflix's Castlevania because Konami was still scarred by a disastrous '90s Hollywood adaptation. Dolph Lundgren was a yolked Simon Belmont, John Travolta was the most overacted Dracula in screen history, and the film bombed so hard that its only enduring cultural legacy was a viral reaction gif of Dolph punching a laughably fake Medusa head until its eyes bugged out.

But in this reality, we got a cartoon that mixes philosophy and long, thoughtful dialogue with toilet humour and extreme violence. After decades of Hollywood pumping out bland, cringy, or outright dogshit videogame movies, the last few years of videogame adaptations have been legitimately amazing, because TV finally gave them time to breathe. The curse has been broken, and we mostly have Netflix to thank for it.

VIDEO NASTIES

Hollywood movies were never the right fit for games. There are probably a hundred reasons why, but if you look back at most of the adaptations made in the '90s and 2000s, you can see the big problems screaming out in all caps. The writers rarely captured what truly made the games appealing; the big movie stars of the day took roles they were poor fits for; the stories either adhered too closely to the games or barely felt like adaptations. Add in what were usually low budgets and B-tier directors and it's no wonder they're almost all relegated to the Bad Movie Night pile.

The streak of bad game movies continued on well into the 2010s. I got drunk on giant Russian beers while watching Warcraft and was still shook by how terrible it was. Best case we got something like Prince of Persia: The Sands of Time, an uncomfortably whitewashed but somewhat competent adventure flick.

Most were far worse, or just boring retreads of games we'd already played, like *Assassin's Creed*.

If the thought ever occurred to movie producers that an adaptation could somehow enrich the source material by building out the backstories of familiar characters or embellishing the game worlds with more detail, it never showed on screen. That's finally changed in just the last couple years with Castlevania, The Witcher, and especially Arcane, the *League of Legends* spin-off that has been a true breakout hit.

Arcane is what a show looks like when it has all the time it needs to cook. I've never seen 3D animation like it: Arcane might not outdo Pixar on raw detail, but it's in a class of its own on style, blending in 2D animation for special effects and detouring into totally different animation for striking one-off scenes.

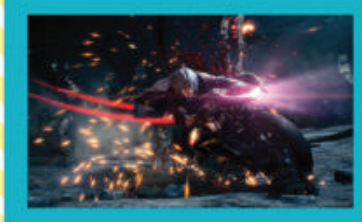
Just as important, Arcane's characters get all the depth here that they never could in the MOBA, fleshing out alliances and rivalries with tragic backstories and political speeches and relationships that get enough screen time to feel real. The most common opinion I've seen about Arcane is that it's a great show regardless of whether or not you've played *League of Legends*, which is a rare honour for a game adaptation. And for fans, it's even better: they get to spend hours immersed in a world they've only ever seen in concept art and short cinematics.

GOOD TO BE BAD

Castlevania also uses the game heroes and timeline as a springboard for a richer, character-driven story. And it's

NEXT TIME ON...

Upcoming game-to-TV adaptations to look forward to



DEVIL MAY CRY

The creators of the Castlevania show are already working on giving *Devil May Cry* the same treatment, with an eight episode season to come and further seasons planned. Dante, Vergil and Lady are confirmed as the leads.

HALO

After a long wait, the Halo TV series should finally be debuting this year. Pablo Schreiber (American Gods) is playing the Master Chief himself, while Cortana will be played by Jen Taylor, who's portrayed her in the games.

ASSASSIN'S CREED

News has been quiet on this one since it was announced at the end of 2020, but in theory Ubisoft is still bringing a live-action series to Netflix – and presumably hoping to wipe away the stain of the film adaptation.

CUPHEAD

A full TV show based on the animation of *Cuphead* was announced in the summer of 2020. We were expecting to see this one release on Netflix in 2021, but the Covid-19 pandemic may have delayed things behind the scenes.

FALLOUT

The creators of Westworld are working on an apocalyptic adaptation for Amazon Prime, which was teased with a trailer that, while short and vague, at least seems to confirm it'll be committing to the retro-future style of the games.

not afraid to fully reshape some characters so that it can do more with them. Isaac, the show's richest character, works through a knot of hatred and self-loathing season-by-season, making for some of its best conversations. In the PS2 game *Curse of Darkness*, meanwhile, he's your quintessential cackling villain dressed for a bondage party. I haven't seen every videogame movie Hollywood's shit out since the '90s, but I can't think of a single one that improves a character for the better.

Time is really key here: instead of trying to cram a full game world into a two-hour movie, Arcane and Castlevania both use their stretch of episodes to dig deeper. The Witcher has a bit more in common with Hollywood adaptations – a big part of the appeal is 'famous movie star appears in live action, and it's expensive' – but it also benefits from time and a star who's dedicated to the source material.

ARCANE AND CASTLEVANIA BOTH USE THEIR EPISODES TO DIG DEEPER

The flexibility of streaming means a game adaptation can take the form it needs to, rather than being mashed into the same generic mould. In this new era, it's OK for The Witcher series to be the big expensive fantasy show, Netflix's stab at Game of Thrones, while animated spinoff Nightmare of the Wolf can fully own its role as a slaughterfest starring Sexy Vesemir. There's no pressure for it to explain the whole Witcher universe to a mainstream audience.

Castlevania was the trailblazer of this new generation of game adaptations, but The Witcher and Arcane are the shows that will inform the next decade of game adaptations because they have that air of prestige. It won't be long before Amazon, Apple, Disney+, and all the other streamers start looking at games for their next billion-dollar epic. Mass Effect looks like it's on the verge of happening already, so it's probably only a matter of time until more series get the Uncle Pennybags treatment.

Hollywood's going to keep trying, but the latest evidence shows little sign of them evolving beyond the same kinds of movies they've always done. Uncharted will look like *Uncharted*, but it won't be any better than playing *Uncharted*, and it won't make playing *Uncharted* better, either. Borderlands, with Kevin Hart, is a wildcard, but this seems like another movie that would work far better as an animated series that had time to explore Pandora. Game adaptations belong to the streamers now, and we've just seen the first few examples of how much better they can be. ■

LEFT: The Witcher's technically not based on the games, but... come on, we all know.

BELOW: Arcane was one of the biggest surprises of last year – an unexpected triumph of game TV.

THE FUTURE IS BRIGHT

Our **PREDICTIONS** for the year ahead – and beyond

Over the past few pages, we've laid out all sorts of exciting things in PC gaming's future – but we reckon there's even more to look forward to. Indulge us as we make our boldest predictions for the events of 2022, combining expert speculation, wishful thinking, and a glimpse into our crystal balls.

Of course, this hobby is one of unbridled chaos – games rise and fall, technology constantly surprises us, and a global pandemic throws everything off its axis whenever it can. Nothing is set in stone. But we still feel pretty good about these predictions. If they come true, we'll be vindicated, and lauded as the prophetic geniuses we surely are. If they don't... well, you can enjoy making fun of us on January 2023.

Bloodborne will come to PC

By Tyler Colp

If I keep saying it, it will happen. This is the year we're going to get *Bloodborne*, FromSoftware's bloodiest action game, on PC. Or at least an announcement. The year is already starting with the PC port of the 2018 *God of War*. That's clearly a step towards releasing a much better game where you get to beat up a (werewolf) dad instead of playing one.

With *Elden Ring* releasing this year, it's time to let a lot more people play *Bloodborne*, even if it's not fully remade like the PlayStation 5 *Demon's Souls*. All the game needs is 60fps and support for some high resolutions. It's a vital release that helped shape modern action games and it would be a crime not to have a semi-updated version of it. It's not even my favourite in the series, but it's a game I'm dying to play again.

GTA VI will be announced for 2023

By Chris Livingston

2023 will be ten years since *GTA V*, and that seems like the right amount of time to bash out another *GTA* game, or at least get close enough to announce it officially. There have certainly been enough rumours flying around, so maybe this prediction isn't all that wild, but I think we'll get our first trailer in time for E3.

I predict a return to the southern US. The map will cover all of Florida this time, which is ripe for Rockstar's satirical takes on American culture.

GTA VI will be full of sun, sand and southerners. Maybe. And if you insist I get bold with this prediction: it'll actually launch on PC at the same time as consoles this time. For real.

The pandemic has already changed development forever

By Robin Valentine

The effect of the novel coronavirus on the games industry has been disastrous. I'm not sure we've ever seen so many delays in such a short span of time, and it's clear that many studios and publishers have found it incredibly difficult to adapt to changing conditions.

But they are adapting. The Covid-19 pandemic has proved the ultimate testing ground for remote working, and many major studios must now be discovering what a few groundbreaking indies have known for years – that removing the need for workers to physical inhabit offices opens up your recruitment pool to talent from all over the world.

I think we'll get a healthier games industry as a result. Not needing to live in one of a few expensive cities in order to be a developer will make the industry accessible to a far greater spectrum of people, including those with disabilities, from less well-off backgrounds, or hailing from underrepresented cultures and nations. I think that'll make for a more exciting and diverse slate of games to come.

The NFT craze will be short-lived

By Tyler Wilde

There's maybe something to NFTs – in the age of online storefronts, it might be nice to feel a little more ownership over some of our digital stuff. But, despite the speed at which the concept is already being adopted, it's currently incoherent at best and a goldmine for scam artists at worst.

Industry execs have just been saying what they always say about new tech – stuff like "this is a technology that's coming" and "we can't ignore it" – and none of the wishful speculation from blockchain evangelists has convinced me that NFTs are really going to transform gaming in the near future. There are a ton of barriers to widespread adoption – including the likes of Valve, which doesn't allow NFTs on Steam. It all points to one outcome – that the value of ape drawings will have corrected itself by now...

Another Nintendo genre will bloom on PC

By Lauren Morton

Ever since *Stardew Valley* kicked off a slew of other *Harvest Moon*-inspired farming simulations on PC, I've been waiting for the next surprise hit. In the last five years, there have been a couple other genres usually relegated to Nintendo systems that seemed like they might make waves on PC. *Pokémon*-like creature collectors *Ooblets* and *Temtem* didn't quite catch fire. *Nickelodeon All-Star Brawl* wasn't a worthy *Smash Bros* contender, and the Warner Bros *Smash*-alike *MultiVersus* is still upcoming.

I think 2022 is the year we see another traditional Nintendo genre leap to PC with a surprise hit. But which one? Maybe we'll finally get a breakout *Smash*-alike, creature catcher, or social sim?

Intro

Games

YOUR GUIDE TO THE LATEST PC GAMES.

GAMES THIS ISSUE

063 DYING LIGHT 2
066 OLLIOLLI WORLD
068 SIFU
072 TOTAL WAR: WARHAMMER III

SCORING SYSTEM

PCPP scores its games on a 1 to 100 scale. The higher, the better – though 100 is by no means a "perfect" game. We're not convinced such a thing exists, so consider a 100 a masterpiece of PC gaming, despite its inevitable flaws. A 50 is a decidedly average game; one that doesn't excel in any particular area, without being an affront to our senses – the ultimate in mediocrity. Below this, you'll start to find the games our reviewers suffered an aneurysm getting through; above it, the titles truly worth your time and money. And remember: a score is only a vague indication of quality. Always read the full review for the definitive opinion!

POWERED BY
REPUBLIC OF GAMERS

NIGHT CITY

DYING LIGHT 2 is bigger and better than the original

By Christopher Livingston

I land a flying kick into a bandit and send him screaming off the edge of a roof and onto the zombie-filled streets below. In *Dying Light 2* this has become my singular goal: kick dudes off roofs. The city is in peril, I have a half-dozen unfinished sidequests in my journal, and my map is littered with icons imploring me to scavenge resources, discover new locations and undertake parkour challenges.

Apologies. I can't actually deal with any of that right now. Somewhere in the city another bandit is standing too close to the edge of another rooftop and he needs booting off it. And reaching that rooftop is just as much fun as kicking someone off it.

To get there I slide down ziplines and bounce off jump-pads, swing like Spider-Man from the rope of my grappling hook, sail through the air with my fold-up paraglider – or I just climb, clamber, wall-run and ledge-grab my way there. *Dying Light 2* is a huge and exhilarating playground for crunchy, kinetic, two-footed combat and satisfying first-person parkour. It doesn't start out like that – there's a few long hours before the game really opens up and gets fun, and there's a lot of not-so-great storytelling along the way. But it's worth it.

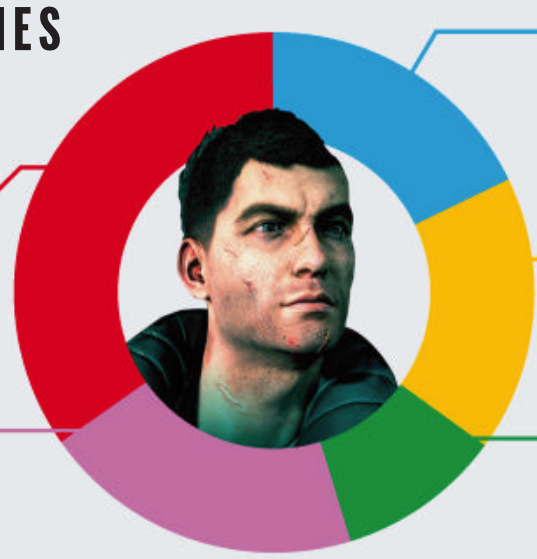
PILGRIM-DARK

Welcome to the European city of Villedor, a sprawling mess of decaying and crumbling buildings with scores of zombies shambling through the streets and pockets of survivors camped out in barricaded safe zones. As Aiden, a travelling do-gooder (called a pilgrim), I've arrived in search of my long-lost sister, Mia, following several convenient flashbacks that show we were the victims of medical experiments as children before being separated. After discovering a vaccine for the original zombie virus, scientists continued messing around until they goofed big-time and unleashed an even deadlier version of the disease upon the world. One particularly evil scientist, a man named Waltz, may hold the key to finding my long-lost sister and my long-delayed revenge.

A huge playground for crunchy, kinetic, two-footed combat

TIME CRIMES

How I spend time in cutscenes



35% TAPPING
I am no longer interested. Tapping the spacebar to skip.

20% TAKING PUNCHES
A lot of people punch Aiden in cutscenes. A lot.

18% FORGETTING
In cutscenes Aiden often forgets about zombies. What's that noise? It's a zombie, Aiden.

17% GETTING KNOCKED OUT
And waking up somewhere else.

10% LISTENING
The people have lots to say, and I'm interested. Sort of.

NEED TO KNOW

WHAT IS IT?
A first-person open world parkour action game set in the zombie apocalypse

DEVELOPER
Techland

PUBLISHER
In-house

REVIEWED ON
RTX 2080, Intel i7-9700K , 16GB RAM

MULTIPLAYER
Co-op

LINK
dl2.dyinglightgame.com

To find Waltz, I need to ingratiate myself with the locals, who are distrustful of outsiders and only give out information in exchange for favours, though thankfully those favours often involve kicking jerks off rooftops. There are two main factions in Villedor – the Survivors, a grubby yet hearty clan who build little farms and safe zones on the rooftops, and the Peacekeepers, who dress in blue combat gear and act like the cops of the apocalypse. When Aiden arrives the two groups are at odds owing to the recent unsolved murder of a Peacekeeper commander, and it's not long before Aiden's eager-to-help attitude gets him wrapped up in the drama between the factions.

I'm not yet a dynamo of flying kicks and fluid parkour when I arrive in Villedor. I'm a complete klutz, a disgrace to the art of climbing walls and running on rooftops. The first few hours of *Dying Light 2*'s feel shaky, slow, and clumsy – I miss my jumps frequently, hesitate at the ledge of every building before leaping, frequently run out of stamina while climbing and hammer away at zombies with ineffectual weapons like table legs and baseball bats. Progression is slow: every enemy I kill and wall I climb sends a trickle of combat and parkour XP into my bank, and only once I've levelled up those talents am I given a single point to unlock a new move from the two skill trees available.

FEET FIRST

Along with my beloved flying two-footed kick, there's more fun foot-related skills: a vault kick, which lets me use a stunned foe as a springboard to launch myself, boots-first, into his comrade (and if my kick stuns him I can simply turn around and springboard back to deliver another kick to the first guy). An air kick lets me target a foe from above, leap down, and drive my foot into his face in glorious slow motion. There's a satisfying headstomp for

ABOVE: Not all zombies shuffle around slowly. Some are quite energetic.

FAR RIGHT: There are lots of things happening in the street besides zombie mobs.

There's not much left of the military, but they have a plan.

mashing a fallen enemy's brains into goo, and even a move that lets me run right into a dude, knock him off a roof and ride his body all the way to the ground, smashing his skull into the pavement. I know, it's not a kick, but it's still an awesome (and hilarious) finisher and a stylish way to get down to street level.

Parkour progression doesn't feel quite as great as adding new combat skills or weapons – at first. It focuses on more practical needs like being able to roll after hitting the ground, or popping back up immediately after landing, or skills that let you leap a bit further or climb a bit quicker. But those skills add up and eventually make movement much more fluid, and me much more confident. Being able to slide through a low gap instead of ducking and walking under it never actually saved my life, but it sure as hell feels good. The city eventually begins to feel less like a bunch of obstacles and more like a jungle gym, and a slick, unbroken run across a district's rooftops makes me feel almost superhuman.

There are more tools to navigate the city that only arrive about halfway through the main story quests, like the paraglider I can use to sail over rooftops, steering into updrafts from air vents to extend my flight and open up an exciting new avenue of travel. It's also the perfect way to escape clawing zombie mobs. Eventually I get a grappling hook, too, not a *Just Cause*-type for yanking myself through the air but one I can sink into an object above me and swing across gaps with like Indiana Jones. With all of these tools in play Villedor becomes a brilliant playground, a massive, zombie-filled puzzle I can solve by climbing, leaping, gliding, and swinging, whether I'm on a quest or just exploring the environment.

CLUB ZED

I haven't really mentioned the zombies much because, well, they're a bit boring and fighting them isn't nearly as much fun as mixing it up with living humans. Some zombies shamble slowly, some swarm quickly, and there are zombie specials, like howlers who attract mobs, spitters who pelt with ranged attacks, lurching blobby ones who explode, and enormous, slow-moving tanks that ground-pound and windmill with giant fists. In the daytime they rarely feel like much of a threat once I've gotten good at parkour, but as in the original *Dying Light*, nighttime changes everything.

When night falls traversing the city becomes incredibly dangerous as all the zombies who avoid daylight head out onto the streets, much meaner and faster than their daytime counterparts. But night also means the interiors of buildings are easier to navigate since most of the hordes are outside. Nighttime activities reward you with more loot and increased XP, so it's a real risk-vs-reward prospect. It's also a fantastic way to add tension. Creeping past slumbering zombies who might wake up at any moment or scuttling across rooftops hoping I don't do anything to make noise and alert the mob always has me holding my breath. And finishing up a long mission and realising night has nearly fallen is a real oh-shit moment, followed by a mad dash to a safe zone as warning bells sound across the city and the howls of the undead begin rising in my ears. Parkour while panicking is the true test of your skills.

The city is massive, filled with activities and random encounters

CONTROL POINTS

Along with the tools to navigate the city, there's a system to change it too. Throughout Villedor's many districts are buildings to conquer like water towers and electrical substations.

Then you'll have to decide if you want to give control of the building to the Peacekeepers or the Survivors. Your choice results in adding something to turn the city streets into a playground of traps – car bombs you can detonate, turrets that fling sawblades, exploding lanterns, electrical and pendulum traps – all great if you love dramatically wiping out mobs of zombies on street level. If you're more into parkouring far above the zeds you can add more ziplines, jump pads you can bounce up to the roofs with, airbags you can grab and ride to the ground, extra air vents for your glider, and other parkour-related features that make navigating the city quicker and easier. Your choices shape the city into the type of playground you want.

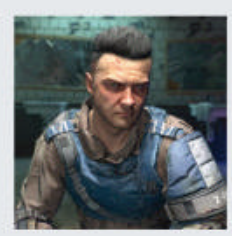
Before launch developer Techland said *Dying Light 2* would take players 500 hours to fully complete, not just the main story quests but sidequests, challenges, activities, secrets, etc. After playing I almost believe it. *Dying Light 2* is a big game, y'all. The city is massive, filled with activities and random encounters and rooftop skirmishes, and even with a glider and other parkour toys just crossing a single district takes ages. Villedor is even bigger than a cursory glance of the map suggests because there are regions that sprawl well outside the borders. After finishing the story I ran along the edge of a district and discovered there's an underwater portion of the city I didn't even know existed. This game is huge.

After the 50 hours it took me to complete the main quest, about a dozen sidequests, and a bunch of other activities, I still have plenty to do in *Dying Light 2*, and I'm keen to keep playing. Hell, even after wrapping up the story there are still a bunch of skills I haven't unlocked, quests I haven't begun, and large sections of the city I've barely set foot in – not to mention plenty of bandits I've yet to set foot on. ■

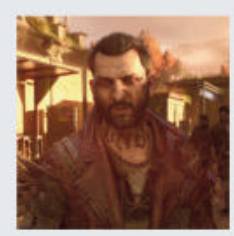
FRACTURED FACTIONS

The different groups of Viledor

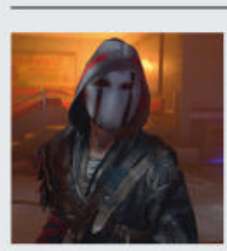
SURVIVORS
Grubby but earnest. They want the city to be free.



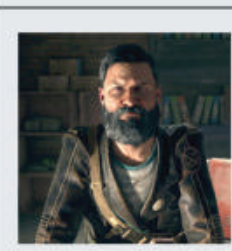
PEACEKEEPERS
Cops of the apocalypse. Looking to impose order.



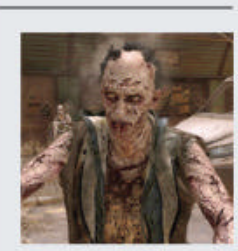
BANDITS
They steal and kill. They run away, too, and are fun to chase.



RENEGADES
Organised bandits looking to expand their turf.



COURIERS
They just want to deliver the mail. You can help!



ZOMBIES
Their key policy is biting you. They have a point.

PC PowerPlay VERDICT

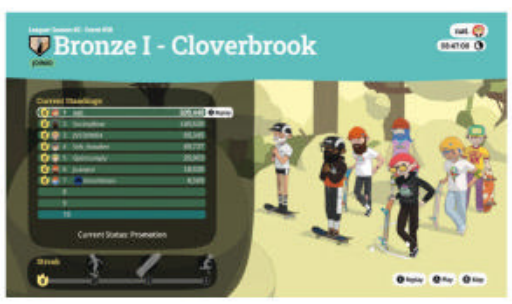
Dying Light 2 has an underwhelming story but boasts a massive, exciting sandbox of parkour and combat.

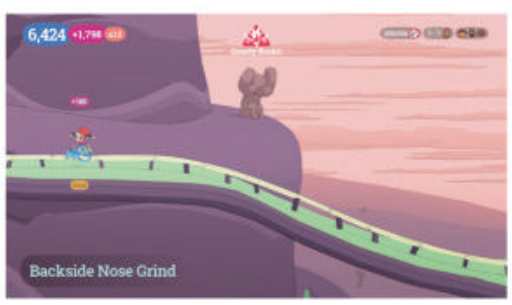
84

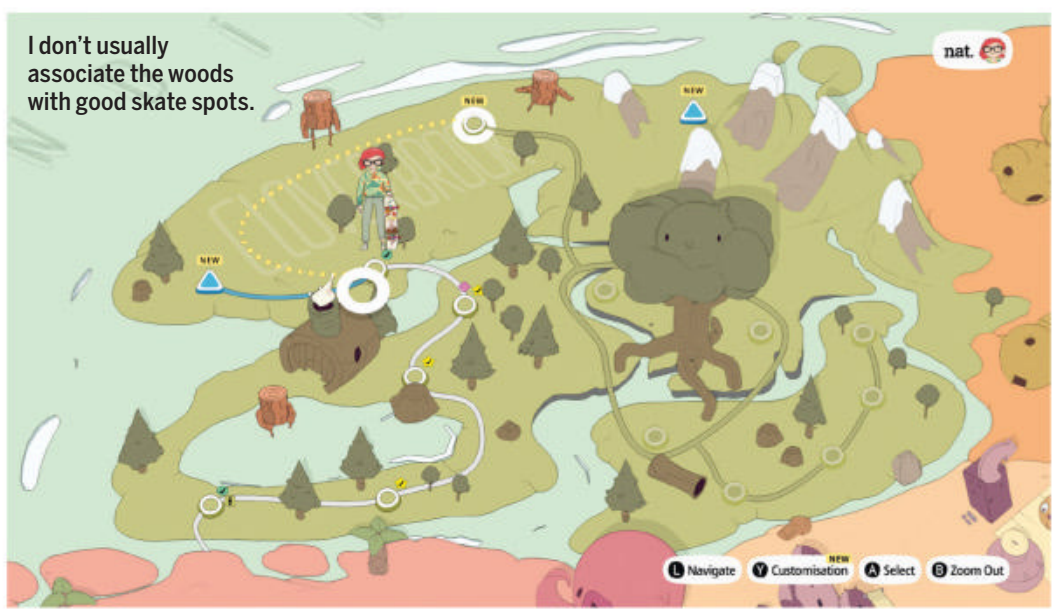
RIGHT: Battle to be the best on your board every day.

BELOW RIGHT: This prickly fella just likes to watch.

BELOW: Gnarvana is an endless, dreamlike skatopia.







FRESH STYLE

OLLIOLLI WORLD is a radical refresh for the sidescrolling skater

By Nat Clayton

O*lliOlli World* isn't like other skaters. It's not shredding lines down some asphalt concourse, pissing off security guards and scaring passing shoppers as it slams a 50-50 into the kerb. Roll7's series of sidescrolling skaters has instead travelled to the far-off shores of Radlandia, a skater's paradise where the rails are always polished and aspiring shredders compete for the chance to become the next Skate Wizard.

OlliOlli World is weirder and wilder than those who *Olli*'d before it – and it's all the better for it.

The third game in the series follows the template laid out by *OlliOlli 1* and *2*. You're tasked with skating a line down a sidescrolling course, using A to push and the left stick to launch into kickflips and the like. As you go on you build up your bag of tricks, chaining combos with manuals, grinds and wallrides as you look to not only finish stages, but finish them in style.

OlliOlli World loves skateboarding – not just the tricks and flips, but the culture, the fashion and the music, which in 2022 means more chillhop beats than thrash punk and ska. But it doesn't feel absolutely beholden to the idea of what skateboarding culture needs to look like. While *OlliOlli 1* and *2* sported a recognisable set of sidewalks to shred, *World* uses those touchstones to create a wonderfully surreal Adventure Time-esque skatopia.

More laid-back and approachable than past games

It's a much-needed tonal refresh for the series, and one that plays perfectly into a new-found third dimension. Skate lines weave around cliffs, abandoned casinos, and massive ice cream cones. Switching from flat backdrops to a world with real depth doesn't just make *World* a prettier game – it gives Roll7's designers much more space to challenge your skate skills.

OlliOlli World's stages now shift back and forth, looping around on themselves with quarter pipe gaps and destructible floors that open new routes. This new freedom is best explored in tough new Gnarly Routes. Take the right turn and you'll be pulled down a harder path, demanding more precise jumps and tricks at a faster pace, with the promise of more stylish rewards.

NEED TO KNOW

WHAT IS IT?
Skateboarding as a sidescrolling platformer

DEVELOPER
Roll7

PUBLISHER
Private Division

REVIEWED ON
RTX 2070, 16GB RAM, AMD Ryzen 5 3600

MULTIPLAYER
No

LINK
bit.ly/34IW9Tr

EASY ROLLING

That said, *OlliOlli World* has taken great care to make its particular style of skating feel more laid-back and approachable than past games – at least for the first few stages.

More punishing elements have been removed in favour of offering higher score bonuses. But levels also feel more laid-back at first, and new elements are doled out so gradually that you'll still be getting tutorials well into the third or fourth region out of the game's five total.

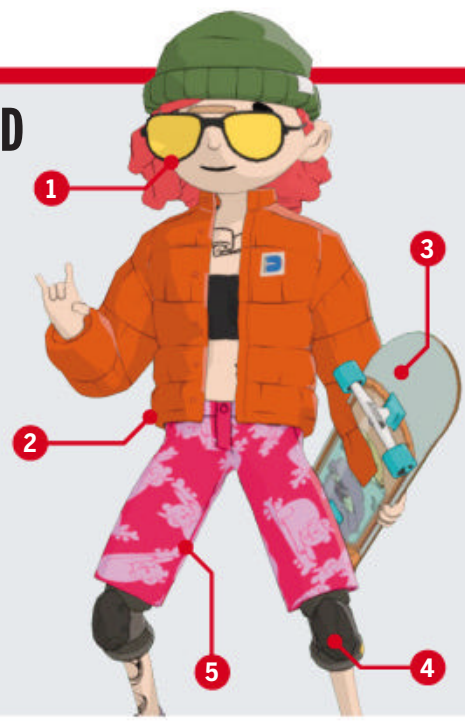
Each map has its own leaderboards, and revisiting a stage will assign you a rival to face off against. But that's a lot of stages to battle over – and while I'm sure there'll be folks competing for these spots, Gnarvana is where most challenge-seekers will get their fix.

Unlocked after beating the first region, Gnarvana is a mystical space that lets you generate and share tracks by choosing their difficulty, length and biome. Being cobbled together from proc-gen parts they miss the bespoke appeal of the main stages, but it's also where *World*'s Daily Challenges exist – spewing out a new track every day to fight over.

World's pivot to a gentler learning curve may risk putting off series die-hards, but skateboarding games are in the midst of a renaissance. *World*'s radical reinvention doesn't just help it keep up with this pack of new skaters – it's just what the series needed to spawn one of the most stylish, satisfying skaters around. ■

IT'S CALLED FASHION

Look it up



1 HOBOLOGO NAVIGATORS
Keep the sun out your eyes while stuntin'.

2 WORKSHOP PUFFER
Make an impression with a bold, bulky silhouette.

3 DROWN TOWN BOARD
What's a skater without a suitably gnarly deck graphic?

4 GREY PADS
There's nothing less stylish than skinned knees.

5 SHIBA INU SHORTS
When at the beach, do as the beach-goers do.

PC PowerPlay VERDICT

A fresh new style and smoothed out lines make *OlliOlli World* an unmissable skate-'em-up. And that's just gnarly.

86

BRAWLER REVIVAL

Become a kung fu master in SIFU

By Tyler Wilde

Was *Sifu*'s final cutscene worth the frustration I endured to see it? Not really, but at risk of sounding like I'm quoting some misattributed kung fu aphorism, the *experience* of mastering *Sifu*'s combat is what mattered and I couldn't get enough of it. That's down to some of the most enjoyable melee combat ever – fluid, funny, improvisational – and a devilish structure that taunted me with its contemptible *fairness*.

Sifu is a singleplayer-only brawler with just five levels, each of which ends in a two-stage boss fight. Except for the final boss' annoying immunity to certain attacks, there are no tricks. The bosses can all be defeated just like any other opponent, and the opening credits even show you how to fight them. When you make it to the second phase of a boss fight, *Sifu* even restores all your health. It's so charitable that every time I died, I said a few short words of gratitude through my clenched teeth.

You aren't even out of the fight when *Sifu* kills you. Thanks to a magic talisman, the protagonist can be resurrected on the spot, which causes them to age one or more years – the penalty increases each time the talisman is used. That gives you more than ten chances to kill all five bosses while blowing through the hero's 20s, 30s, 40s, 50s and 60s.

Beating up bouncers in *Sifu* is exceptionally fun

OLD BOY

At some point in their 70s, the protagonist will use up the talisman's last charge, and another death will be game over. That's not too big of a deal, because you don't have to beat all five bosses in one run. Once you've reached a level, you can restart it as many times as you want, always beginning from the lowest age at which you finished the previous level. If you're struggling to beat a boss – the bloodthirsty, demonic museum owner, for instance – one option is to give yourself more leeway by attempting to finish the previous level at a younger age. You might need to replay the level before that level, too, though, and at that point you may as well start from the beginning and grind out some permanent skill unlocks.

That's the devilishness of *Sifu*: when the way forward is too difficult, you can always admit your deficiencies and go back in time to do better, drawing out what would otherwise be a brief experience. Even with unlockable shortcuts, most levels contain a few encounters before you reattempt the boss fight.

I don't know if *Sifu* would be possible before SSD times, because even as it stands I think it takes too long to restart a level, never mind get back to the boss fight. It's about repetition, which makes any and all forced lingering irritating. For instance, there are pointless moments where you've got to listen to an inane line of dialogue and respond before progressing – I do not need to ask what the goddamn three trials are the 30th time I am doing the three trials! – and there are beautiful but strangely long, unpopulated passageways everywhere you go.

It's irritating how compelling *Sifu* is in spite of all that. I can't say that I was exactly happy to beat up the same nightclub bouncer 50 or so times on my way into the second level, but I didn't feel I could accept defeat, either. And at least when my cortisol levels are within a normal range, beating up bouncers in *Sifu* is exceptionally fun.

FLURRY OF FISTS

All of your time in *Sifu* is spent heading toward bosses or fighting them, but they aren't its best fights. The boss battles are all one-on-one bouts, and although I should probably thank the videogame gods that we've been spared a boss who calls in waves of reinforcements, this is one game where that might've actually been good.

Beating solo enemies in *Sifu* largely involves the same pattern memorisation you can find back in the NES era of gaming, with some

NEED TO KNOW

WHAT IS IT?
A challenging singleplayer brawler inspired by kung fu and martial arts movies

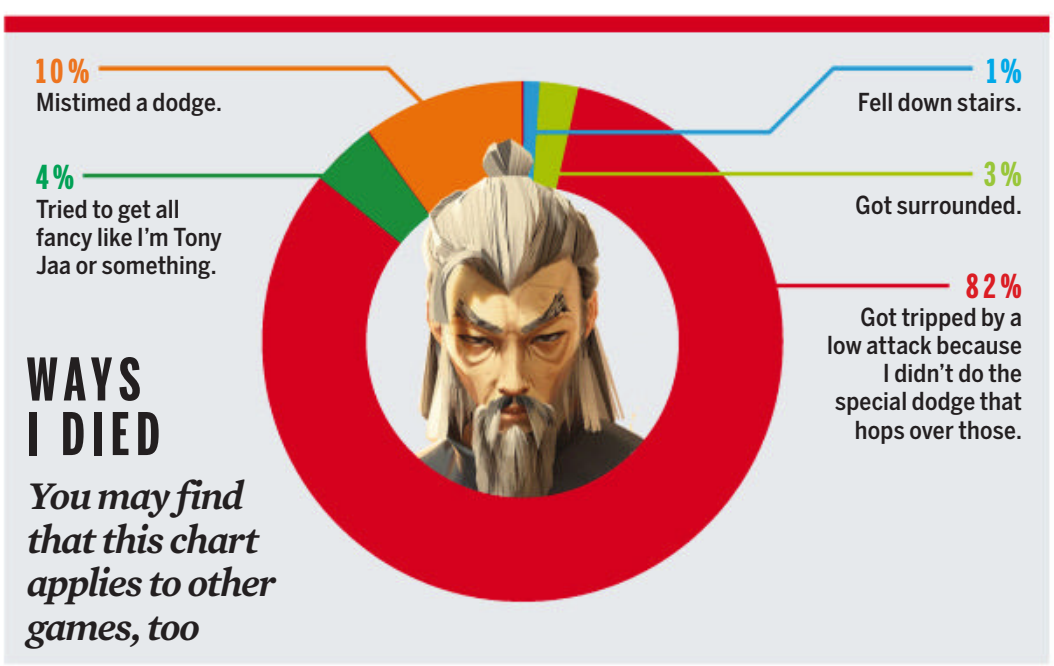
DEVELOPER
Sloclap

PUBLISHER
Sloclap

REVIEWED ON
Intel Core i5-9600K, 16GB RAM, Nvidia RTX 2070 Super

MULTIPLAYER
No

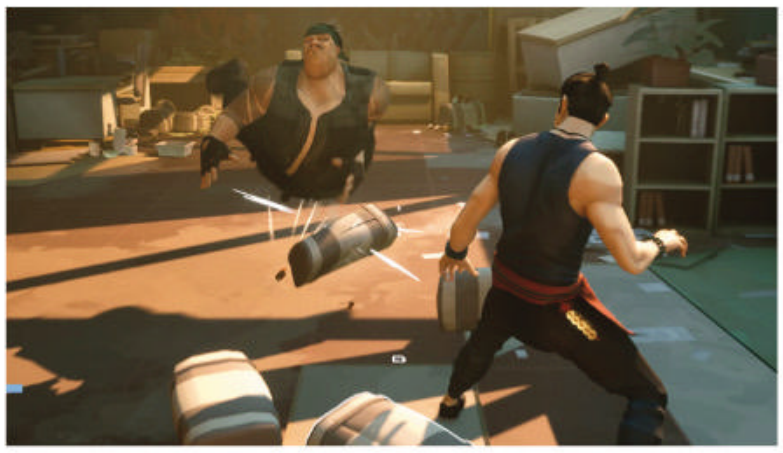
LINK
sifugame.com

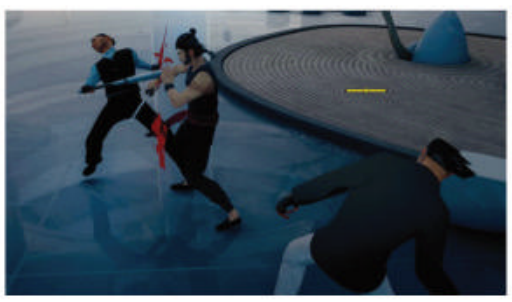

10%
Mistimed a dodge.
4%
Tried to get all fancy like I'm Tony Jaa or something.
1%
Fell down stairs.
3%
Got surrounded.
82%
Got tripped by a low attack because I didn't do the special dodge that hops over those.

WAYS I DIED

You may find that this chart applies to other games, too

Maybe stop making fire your whole thing after you're half mummy.





FAR LEFT: Shoving enemies off ledges just feels mean.

LEFT: Things get bloody when the swords come out.

Breaking an enemy's 'structure' opens them to a finishing blow.

Real challenge: age until you have the best beard, then stay that age.

RIGHT: There's an Oldboy corridor fight early on.

FAR RIGHT: When in doubt, hit someone with a pipe.

Limbs conveniently glow before big attacks.

variance to keep you on your toes. Inscribing attack patterns into your brain folds is a tried and true form of fun, and I did delight in finally snuffing out each boss, easily dodging combos that once tormented me – even the damned sweeping trip attacks. But *Sifu* shines where memorisation meets improvisation and playfulness, an experience mainly found in the goon-filled rooms on the way to the bosses.

You can produce wildly diverse combinations of kneeings, elbowings, kicks, punches, and throws from just two buttons and an analog stick. (There's keyboard and mouse support, too, but it feels like playing *Rocket League* that way: doable, but weird.) It's fun just to take part in such a stylish display of imagined (but mostly grounded) athleticism, but *Sifu*'s brilliance lies more in defence than offence.

You can slip and roll around and under haymakers, kicks, and grabs, which basic enemies telegraph clearly like the amateurs they are (thanks to *Sifu* being a singleplayer game, it can slow down time to make this easier). It's possible to avoid most attacks that way, and it's enormously satisfying to stand in place dodging every foot and fist and baseball bat that enters your airspace like a pro boxer who outclasses their opponent and definitely knows it.

When everything clicks, all your moves flow together in long brawls that look more like some amazing movie action scene than something you could possibly be controlling. There's a big fight inside the nightclub level that can't be avoided, and so I've done it dozens of times. It's always a little different, but a snippet of it might go something like this: I run in and beat a guy to the floor with a baseball bat, bounce it off someone else's forehead, dodge a punch from behind me and then throw a backhand into their temple without turning around (the charged backfist attack has become one of my favourite unlocks), trip another combatant with a kick and then dodge an incoming punch by kneeling down to hammer them with punches, stand the tripped guy back up and palm strike him over a staircase, sending him tumbling onto the dance floor, kick an ottoman at another dude to throw out his legs, too, and so on. There's much more you can do in just those five levels.

You can slip and roll around and under haymakers, kicks and grabs

INTO DREAMS

But the kung fu revenge tale meant to make sense of those levels comes across like someone's poorly-remembered dream. In its otherworldly China, nightclubs, corporations and medical centres are all run by elusive kung fu masters, a drug lab transforms into a bamboo grove, and a museum elevator leads to a moonlit night. Like so many dreams, the plot probably matters more to the dreamer than to anyone else, but *Sifu*'s logic can be enjoyably uncanny and its visual effects are fantastic. At one point, waves of golden energy rise from a deep-earth bell, seeming to liquify banded iron ore in the cave walls surrounding you. Rather than *Sifu*'s clumsy dialogue and character barks, I wanted that powerful foreshadowing to be paired with some of Max Payne's noir monologuing, "My future was ringing in my ears..."

Remedy's waking nightmares in *Max Payne* and *Control* do make for a decent point of comparison, but Quentin Tarantino films are really *Sifu*'s nearest comparison. The opening cutscene is reminiscent of O-Ren Ishii's animated origin in Kill Bill, and like those movies it's guided in large part by a fascination with cliché and archetype. Martial arts films are the major inspiration for both, and early in *Sifu* there's a direct nod to the hallway fight in Oldboy. That first level doubles as an homage to The Raid, taking place in an apartment building strewn with junkies who the protagonist notes aren't a threat, more or less informing us that they're just props.

They're slightly more than that by the end, as the expensive-looking healing centre at the conclusion provides some critical contrast. That connection may say more about the country I live in than China, though. *Sifu*'s point of view on the nation it's set in is hazy. The Paris-based studio worked with Chinese consultants, and its creative director is associated with a French Pak Mei kung fu master, the chosen disciple of master Lao Wei San in Foshan. Reverence for that tradition and lineage is obvious in the school that acts as the protagonist's home base between levels, but the other places come across like *Control*'s Oceanview Motel: not generic, exactly, but locationless. They could be part of the fictional world in Sloclap's previous game, *Absolver*.

PRACTICE MAKE PERFECT

What is mainly gained from these kung fu enthusiasts is the mechanical videogame adaptation of a specific style of kung fu. I can't say whether or not the character shows faithful form, but the cohesiveness of the moveset comes through brilliantly. And I did have the experience of 'mastery through practice' that was promised. In that way, *Sifu*'s focus on kung fu tradition is a success, even if the setting and story are mostly just mystifying spectacle.

I wish I had recorded my first blundering advance through the opening stage so that I could see just how far I've come. It's hard to remember being a novice after you've trained so much that you can no longer say exactly how you do it: at this point, I just dodge when it's time to dodge and attack when it's time to attack. That's a lot more complicated to do in the physical world, but 30 hours with *Sifu*'s videogame version can at least get you a heady whiff of kung fu mastery. ■

YOUNG VS OLD

The pros and cons of getting older

YOUNG MASTER

- Has more health.
- Whole life ahead of him.
- Dad was murdered pretty recently though, so that stings.
- Lots of muscles.

OLD MASTER

- Does more damage.
- Wasted whole life beating up gangsters for revenge.
- Still sad about dad anyway.
- Good beard.

PC PowerPlay VERDICT

The experience of coolly beating up a dozen goons at once is worth enduring *Sifu*'s lows for.

85

Total War: W[illegible] III

UTTER CHAOS

TOTAL WAR: WARHAMMER III is a bold, experimental final act

By Fraser Brown

It would have been very hard to predict the trajectory *Total War* has taken. It's grown from feudal Japanese battles and a simple board game-style campaign to this, *Warhammer III*, where armies can hop between realities, where daemons and ogres clash, and where troops are led by flying monstrosities – including one that's as customisable as an RPG protagonist.

Creative Assembly has crammed plenty of surprises and oddities into this final act, clearly saving up its strangest experiments for the cataclysmic confrontation between mortals and Chaos. It goes in some strange directions, but always goes big, fully committing to Warhammer's wonderfully over the top brand of fantasy.

The impetus for the conflict is a bearnapping. Ursun, Kislev's hairiest deity, has been imprisoned by the daemon Be'lakor. To make matters worse for the furball, he's also been shot with a cursed bullet by a corrupted Kislev prince. His roars of anguish open up rifts between realities, letting armies cross over to the Realm of Chaos, where they can fight to reach Ursun – some to free him, some to request a boon, and others to steal his power.

It's a setup that leads to a very different style of *Total War* campaign, where conquering the map is still encouraged but isn't quite as important as reaching Ursun's prison. Every 30 or so turns, rifts open up all over the map, spewing out daemonic armies and inviting mortals to enter *Total War*'s weirdest locations, culminating in massive survival battles against a daemon prince. The reward? The prince's soul. Collect four and you can unlock the way to the big bear.

Each section of the Realm of Chaos reflects the personality of its god

HELLBOUND

Each section of the Realm of Chaos reflects the personality of its patron god. Nurgle's realm is a pestilent, toxic nightmare. Slaanesh's realm is a purple-tinged series of rings connected by portals. Tzeentch's realm is a maze of floating islands connected by magic. Khorne's realm is the most straightforward: a hellscape where you simply beat up a lot of daemons and rogue armies until you've earned enough glory.

You'll likely spend around ten turns in each, but they loom over the whole campaign. You know you're going to need to be ready to jump into the next one, so you need to prepare by rapidly expanding and building the toughest army that you can. But since your best army is going to be in a different reality once the rifts open, you need to make sure your territory is still protected from daemonic invasions.

Things can get hairy, especially when the finish line is in sight. If it looks like another faction is going to get their fourth soul before you, you'll need to act quickly, wiping them out before they get it. If that plan fails, though, you've still got a chance to claw back victory from the jaws of defeat. You need to immediately drop what you're doing and wait for them outside Ursun's prison. Defeat the army, and then you'll have another 15 turns to catch up.

That was one of my biggest concerns before the review: how do you win if you're behind? Beating up your opponents is a nice, straightforward answer, and very *Total War*. But doing this also creates new wrinkles. In my first campaign, I was good friends with Nurgle's main faction. But when we both entered Slaanesh's realm, and it looked like Nurgle's lot were going to beat me to the final battle, I had to make a difficult decision. This wasn't the last soul either of us needed, so I could have let my pal win this round, but did I really treasure our friendship that much? It turns out I did not. I got the soul, but the war against Nurgle lasted for a long time.

It's by far the most unusual and involved campaign Creative Assembly has ever designed, and all this novelty made my first playthrough a treat. It has diminishing returns, however, and now that I'm more familiar with the Realm of Chaos, privy to its nasty bag of tricks, I sometimes resent dragging myself back there when I could be gobbling up settlements, putting it at odds with the sandbox.

NEED TO KNOW

WHAT IS IT?
A sprawling fantasy RTS that serves as the conclusion to the *Total War: Warhammer* trilogy

DEVELOPER
Creative Assembly

PUBLISHER
SEGA, Feral Interactive

REVIEWED ON
RTX 2080, Intel i7-9700K , 16GB RAM

MULTIPLAYER
Yes

LINK
bit.ly/3JyNyBq

DRESS FOR SUCCESS

The many looks of the Daemon Prince

KHORNE
If your look is repping Khorne, you'll be perfectly suited to charging into the fray and tearing up the opposition.

NURGLE
Nurgle gear will make people cross the street to get away from you. And just like the diseases you spread, you're hardy as hell.

SLAANESH
If you're shopping in the same place as Slaanesh, expect to be invited to some parties – the best place to show off your scythe arms.

TZEENTCH
And finally, if you're copying Tzeentch's style, you get to flit around the battlefield as a big, magically-inclined bird.

Total War: Warhammer III

The same goes for the survival battle at the end of each of them. The wave-based assaults and tower defence elements, which let you spend resources earned in battle on various walls and towers, as well as reinforcements, give these battles such a different feel that I immediately found them compelling, but by my second campaign I started to see past the novelty.

Sure, the vast scale of them continues to impress me, but the tower defence elements are a bit on the thin side. You get access to four types of towers and walls, and a few specific locations where you're allowed to build them. Think they'd be more effective elsewhere? Tough. And even with Creative Assembly trying to create lanes, everything is just too big, too wide, and you never get that sense that you're manipulating the battlefield like you do in dedicated tower defence affairs.

While the survival battles start to lose their lustre after a campaign or two, new modes are very welcome, and the experiment does have a pay-off. Siege battles and the returning minor settlement fights also get these fortifications. These maps typically have a much more elaborate layout than the straight line of survival battles, with bridges and underpasses, plenty of elevation, and loads of places to create chokepoints. There are more ways for them to play out, and while you're still limited to building on predetermined spots, the more dynamic nature of these fights means that the choice of where and what to build next feels tactical rather than arbitrary.

When you're playing a Chaos faction, you feel like a force of nature

WILD BUNCH

The bulk of the campaign still takes place on the more conventional sandbox map, some parts of which you'll recognise from the first game – but thanks to *Warhammer III*'s unusual factions, overfamiliarity shouldn't be a problem. The highlight is the Daemons of Chaos faction. Each of the Chaos gods have their own crews, but the Daemons of Chaos, led by the aforementioned corrupted Kislev prince – now a daemon prince – is a united front, letting you recruit units from the entire pantheon and use each army's unique abilities. The prince's new form is malleable, letting you replace his limbs with new ones earned by dedicating your achievements to specific gods, or to all Chaos.

The prince is also the subject of *Warhammer III*'s excellent prologue and has the most personal connection to the campaign. Between the narrative structure and the astonishing variety of limbs and weapons you can equip him with, playing the Daemons of Chaos is almost like playing a *Total War* RPG. The story of a heroic knight becoming his land's worst nightmare is also extremely evocative of Arthas' fall in *Warcraft III*, a story that's still one of my favourites, so it had a rapt audience. It's the most I've enjoyed a single *Total War* campaign.

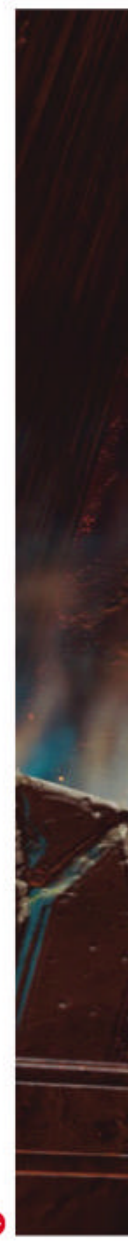
With the Daemons of Chaos boasting all this flexibility, it does slightly dilute the impact of all the other daemonic factions. But they still have unique characters, starting locations, and objectives that make them distinct enough to be worth taking for a spin. And while they all serve Chaos, they do so in very different ways, from Khorne's take-no-prisoners approach, to Slaanesh's sneaky, seductive ways.

Over time, the presence of these factions, along with the daemonic incursions from the Realm of Chaos, warps the mortal world. Chaos corruption exists in the other games, too, but there's a lot more Chaos in *Warhammer III*, and specific flavours this time. These god-specific brands of corruption all have different effects, slowly choking the lands they spread through, and eventually they start to resemble the domain of the god corrupting them. One day you're ruling over lovely green fields and snow-capped mountains, and the next you've got toxic lakes and hill-sized cysts appearing everywhere, or everything's covered in ash and lava.

When you're playing a Chaos faction, you feel like a force of nature – especially if you're one of Nurgle's lot, since you can spread a variety of very nasty plagues on top of Nurgle's brand of Chaos corruption. And you're an existential threat to the mortal factions, which is why – with the exception of Chaos-followers like the norscans and skaven – you're in a perpetual state of war with them.

Siding with Chaos is very tempting, then, but their opponents are also a fascinating and varied bunch. With Kislev and Grand Cathay you've got two armies that, at the moment, are unique to *Total War*. Both exist in the periphery and lore of the tabletop game, and until Games Workshop finishes its upcoming Kislev army, this is the only way to get your fix.

Kislev is all about bears and ice magic. Grand Cathay has dragons and trade. I might be underselling them a little bit. I definitely should have mentioned that some of those bears are giant magic bears that tower over everything. And maybe that the aforementioned dragons are actually Grand Cathay's leaders, who can shapeshift in the middle of battle. You're meant to pick your moments and switch between your forms depending on the situation, but if you

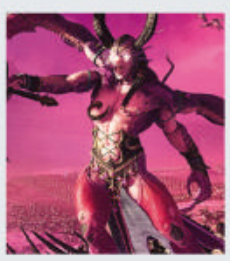


COME FOR THE CHAOS

Who are the Chaos gods?

KHORNE
Khorne is obsessed with blood and violence, and his followers like to get drunk on rage and gore, increasing in ferocity with each battle won.

NURGLE
The most grotesque of the Chaos gods, ol' Nurgle and his followers love nothing more than spreading plagues and making everyone vomit up their lunch.



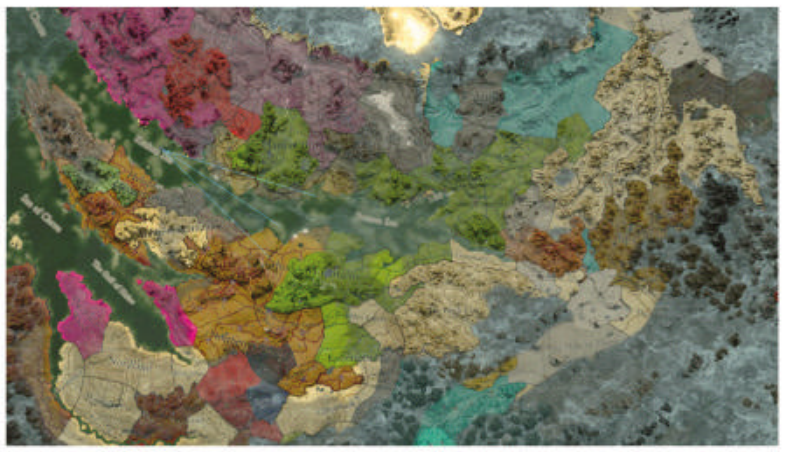
SLAANESH
The horniest of all the Chaos gods, Slaanesh is a seductive force, tempting mortals and keeping S&M shops in business. Don't trust their lies.

TZEENTCH
The god of bird watchers and weird magic, Tzeentch drives people bonkers with his hard to pronounce name and his army of chittering horrors.

ABOVE: In the war business, this is what we call a clusterfuck.

FAR LEFT: Who needs puny rifles when you can carry a cannon?

Be'lakor looks comfy on this throne. Let's change that.



Above: I spy with my horrifying giant eye...

It's chilly in Kiselv, but daemons can warm you up.

tell me I can shapeshift into a dragon, I'm going to shapeshift into a dragon and then stay that way.

It might not be as out-there as the Daemons of Chaos, but I'm pretty smitten with the Ogre Kingdoms. The big lads have been served up as pre-order DLC, but I expect we'll see them sold separately later. I recommend picking them up when that happens, because these hungry boys have a lot going on, including rapidly expanding camps that can be deployed in enemy territory, the strongest economy in the game, and a passion for meat that's both a curse and a superpower.

RAGS TO RICHES

That brings us to the economy. I know, not quite as exciting as daemons fighting elemental bears. And that's always been a problem for *Total War*: the economic side of things is typically an obligation rather than a system you actively want to engage with. *Warhammer III* doesn't have a perfect solution, but it does improve things at a faction level.

While it's easy to get rich as the Ogre Kingdoms, meat is even more important than gold. Without a constant supply of it, ogre armies turn to cannibalism. Now this technically happens in a less flavourful way with gold: when you run out, your troops start leaving. But with meat, this all happens locally. Each army has its own supply, and rather than getting meat from a large pool, it gets it from the local area, either from a camp or through battle.

This pushes you to be extremely aggressive, constantly getting into fights and gobbling up new settlements to keep everyone's belly full, but also tasks you with essentially creating a supply line to keep the troops fed. It's not a complicated logistical challenge, but it is more engaging than earning gold.

Grand Cathay's Ivory Road trading system is very different but similarly benefits from being designed with Cathay's narrative identity in mind. While most trading in *Total War* involves just chatting to other leaders and striking a deal, the Ivory Road lets Cathay dispatch caravans to distant lands, selecting the value of the cargo and the route. During the journey your caravan might be attacked or face other crises, matching the potentially huge rewards with some equally big risks. For Cathay, then, trade is an interactive adventure.

The headline feature, though, is brand-new: outposts

Diplomacy, like the economy, has moved closer to the heart of what *Total War* does, but can still feel like an ancillary feature that doesn't get enough attention. *Three Kingdoms* made some big leaps here, and while *Warhammer III* doesn't include the personal diplomacy that *Three Kingdoms* introduced, it has borrowed the quick deal option, which makes figuring out what you can do and with whom much easier.

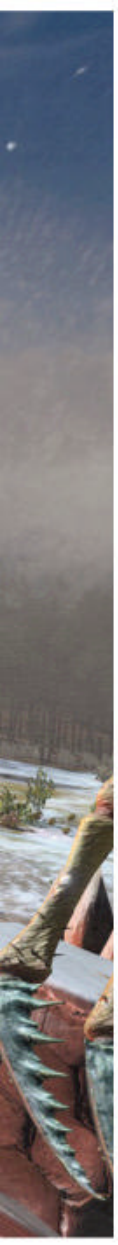
The headline feature, though, is brand-new: outposts. When you forge an alliance with another faction, you both get the option of constructing an outpost, which adds your troops to their garrison and, more importantly, lets you recruit troops from their roster. The most obvious benefit of this is being able to fill in gaps in your roster, but its true value is the third set of recruitment slots, letting you recruit units even if you've maxed out your global and local allotment.

Diplomacy rewards you with incredible flexibility, which in turn encourages you to deal with your neighbours more often. Allied reinforcements cost Allegiance, which is earned by completing quests for the faction you're trying to sway, tasking you with defeating armies they have beef with, bringing the whole thing back to conflict.

After hundreds of hours of *Warhammer II*, the little quality of life improvements feel just as impactful, particularly the inclusion of simultaneous turns in multiplayer and simultaneous movement in both modes. You already know where your army is going, so why should you have to wait around and watch them do it before commanding the next one? You shouldn't, and now you don't need to bother.

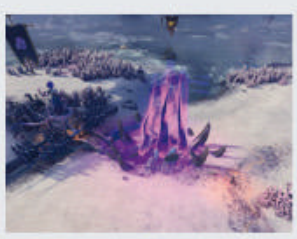
I've already sunk nearly 100 hours into *Warhammer III*, which should give you an inkling of how much I'm digging it. And while I'm no longer as eager to go through the Realm of Chaos campaign again, that's only a slice of what *Warhammer III* is. There's a whole other domination campaign after you defeat Be'lakor, where you get to swallow up the rest of the world, helped by some special post-campaign rewards. And though I might bristle a bit at the idea of sending my leader off to his second job at inconvenient moments before that point, it's honestly just so much fun to play with these factions and create dream armies that I can put up with the hurdle.

While this would have been a fitting conclusion to what's been an ambitious trilogy, it's not done yet. There will be more factions, expansions and another campaign, combining the factions and maps across the whole trilogy, nicknamed 'Immortal Empires'. *Total War: Warhammer III* is already brilliant regardless of what comes next, but the prospect of six years worth of factions fighting over one map has me more excited than an ogre in an abattoir. The future looks bloody. ■

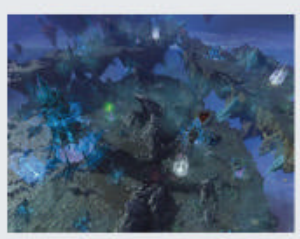


HOLIDAY IN HELL

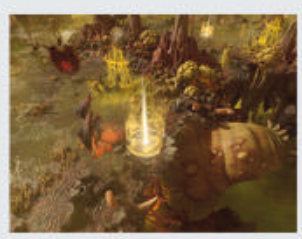
How to conquer the Realm of Chaos



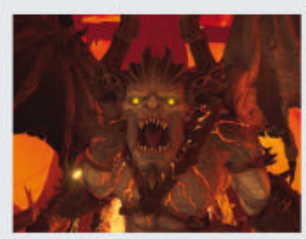
Starting on the 30th turn, rifts start appearing periodically, spitting out daemons and allowing you to travel to the Realm



Only leaders and their armies can enter, and each domain has specific challenges, for example Nurgle's domain will give you a nasty dose of poison.



In each map, you'll find points of interest that make the journey easier. You'll be able to get unique weapons, and get hints about where you should head next.



Once your objectives are fulfilled, you can head to the survival battle, unique to the Realm of Chaos, where you'll need to murder your way to the boss.

PC PowerPlay VERDICT

***Total War: Warhammer III* is a brilliant final act to the series and has the most inventive and unusual factions yet.**

90

Intro

Tech

YOUR GUIDE TO PC GAMING HARDWARE.

PC PowerPlay POWER AWARD

Our Power Award is given to products that are best in class no matter your budget.

PC PowerPlay SMART BUY

Our Smart Buy Award goes to products that balance performance with price tag.

GEAR THIS ISSUE

079 CORSAIR ICUE 5000X RGB
080 GAMING PROJECTORS
086 600-SERIES MOTHERBOARDS

THE PCPP TESTBENCH

CPU INTEL I7 7700K INTEL.COM.AU
MOBO ASUS Z270 ROG CROSSHAIR VI HERO ASUS.COM.AU
RAM 2 X BALLISTIX 8GB DDR4-3200 CRUCIAL.COM
PSU CORSAIR 850W PSU CORSAIR.COM
COOLING H105 CORSAIR COOLER WWW.CORSAIR.COM.AU

PC CASE

Corsair iCUE 5000T RGB

A big, bold, bright and attention-grabbing case.

PRICE $499 **ONLINE** www.corsair.com

When you first lift the Corsair iCUE 5000T out of its large box, the first thing that strikes you is how imposing, heavy and well-built it is. You'll need a large desk to accommodate it.

The 5000T is a case that puts a heavy emphasis on RGB lighting. The case itself features 160 addressable LEDs that are arranged in six strips, made up of two along each side of the top, bottom and front of the case. You get an additional 16 per fan, meaning the 5000T comes with no less than 208 individually addressable LEDs! All of the LEDs are connected to the included iCUE Commander Core XT controller. It can control the RGB lighting and speeds of up to six fans.

The 5000T isn't all flashy good looks. It comes with three Corsair LL120 RGB PWM fans; these cost at least $35 each and they go a long way to explaining why the 5000T costs as much as it does. The fans operate at speeds of between 600 to 1500RPM. The front ports consist of a USB 3.1 Type-C port, four USB 3.0 ports and a combo audio/microphone jack.

As its name suggests, the 5000T relies on Corsair's iCUE software for its RGB functionality. Though it can be considered a fairly resource intensive piece of software, in our testing, iCUE works very well. If you love RGB lighting, you'll love taking the time to create your own lighting theme.

System installation is fairly straightforward; however, the case does have its quirks, and some disassembly will be required, especially if your PSU has stiff cables, which may require the removal of a drive cage. There's a lot of space available between the cage and the front of the case so we're not sure why Corsair can't simply shift it forward a few centimetres.

The LL120 fans are very good. They shift a lot of air and we had no issues keeping our 12900K test system cool under a 100 percent load, even with 'just' a 240mm AIO. However, we'd like to see the inclusion of a rear case fan. Not every system needs one, particularly if you're running fans at the top of the case, but nevertheless, it feels like an omission.

SPECS: Dimensions (L x W x H): 530mm x 251mm x 560mm; Material: Steel, Plastic, Tempered Glass; Cooling Layout: Front: 3x 120mm (3x LL120 fans included), top: 3x 120mm, motherboard tray: 3x 120mm, rear: 1x 120mm; Front I/O: USB 3.0 (x4), USB 3.1 Type-C (x1) Headphone/ Microphone (x1); Storage: 4x 2.5in SSDs and 2x 3.5in

The 5000T is a stunning high-end case, but at $499 it faces stiff competition, not just in its price range, but from below it. The likes of Corsair's own iCUE 5000X or Obsidian 500D SE may not have the RGB capabilities or the Commander XT controller of the 5000T, but they're much cheaper, so you'll need to decide if all that RGB goodness is worth it to you.

If you're an RGB lover and you're the owner of other Corsair components, the 5000T will seamlessly blend into your iCUE setup. Its open design will help to keep even the hottest CPUs and GPUs cool and its build quality is first rate. Yes, it's very expensive, but a good case is an investment. It will serve you well for many years. We just wish it was a bit cheaper to give us another reason to love it.

CHRIS SZEWCZYK

PC PowerPlay VERDICT

The Corsair iCUE 5000T is an excellent case, especially for RGB lovers, but its steep $499 price is tough to justify.

80

GROUP TEST

GAMING PROJECTORS

Beamers that will bolster, rather than belittle, your gaming experience.

By Katie Wickens

Using a projector for gaming might sound like a joke, but you'd be surprised how far beamers have come over the years. Sure, the contrast is unlikely to beat the deep blacks of an OLED TV, but the stuff that really matters for gaming – latency, portability and definition – have all seen major improvements.

The projectors of old couldn't hold a candle to the gaming abilities of these modern illuminators, and it seems it's no longer laughable to consider buying a projector instead of a TV for gaming. Besides, gaming isn't the only thing these beamers bring to the table. There are plenty of other benefits to swapping your TV for a projector. Not only will you save space, you'll be able to shift and store your home entertainment system much more easily. It's also a smaller target for controller-hurling kids.

X1300I

BENQ TBC

The best long-throw projector

1 The BenQ X1300I comes in at the top thanks, in no small part, to its impressive 8ms response time. With one of the swiftest refresh rates on the list, at 120Hz, this projector has everything it needs to deliver competitive big-screen gaming, without fear of it compromising your rank. It may not be as fast as the BenQ TK700STi, but there's more to gaming than just speed.

The built-in speakers are surprisingly punchy, and the 30,000 hour lamp life means it'll last a while longer than the speedier BenQ model, provided you don't block the exhausts. In fact, as long as you can mount it on the ceiling – which is where it's best situated – that shouldn't be an issue. Just make sure you have the space for a long-throw projector before you commit to buying.

Either way, it's backed by exceptional brightness, so the light of day shouldn't hamper your gaming experience. And coming in with the kind of speeds you'd expect from a tidy gaming monitor, this beamer will see you right.

PC PowerPlay VERDICT

- 120Hz refresh can match a high fps
- Bright with good lamp life
- Best mounted on the ceiling

SPECS RESOLUTION: 1080P / **LATENCY:** 8 MS / **REFRESH:** 120HZ / **WEIGHT:** 14.1 LBS (6.4 KG)

TK700STi

BENQ $2,599

The fastest beamer of them all

2 The BenQ TK700STi gaming projector shows off with its exemplary 8ms response times when playing in 1080p at 120Hz, and a rather exceptional 4ms at 240Hz. Even in 4K at 60Hz you're looking at a 16ms response time.

This isn't a native 4K projector, however. It uses Texas Instrument's XPR (expanded pixel resolution) pixel-switching tech, and does so rather well. Being a short throw projector also means there's less faff when looking for a place to put it. No need to hang overhead, or tuck it behind the sofa, but if you can manage a distance of 6.5 foot (2m) you get just over 100 inches (2.5 m) of screen space. Coupled with the 3,000 ANSI lumen brightness, the BenQ TK700STi should give up a great cinematic experience even in broad daylight.

While the lamp life – rated at only 15,000 hours on the most eco-friendly setting – leaves something to be desired and external speakers are necessary to get a well rounded sound, there's a lot of power behind this little projector's beams.

PC PowerPlay VERDICT

- Incredible 4ms latency at 1080p
- Impressive 4K upscaling capability
- Below average lamp life

SPECS RESOLUTION: 1080P / 4K UPSCALED / **LATENCY:** 4 MS / **REFRESH:** 240HZ / **WEIGHT:** 6.8 LBS (3.1 KG)

2

1

THE DIFFERENCE FOR COMPETITIVE GAMING USAGE

Sometimes projectors come into the gaming space claiming to be for 'pro-gaming'. But in order to deliver on their promise, a projector really has to ace two main things.

First off, it should be able to achieve a latency of lower than 60ms. Lower is better, especially for competitive gaming, as your reactions will count for more. All those listed here manage 40ms or lower, with the top choices even reaching below the 5ms mark.

The other thing is refresh rate. If your machine pumps out high frame rates, your projector should match it. Our picks have refresh rates of 120Hz or over, but for non-competitive gamers 60Hz is fine.

THE 16-20MS RESPONSE TIME IS STILL GREAT FOR PLAYING AAA GAMES IN UP TO 4K

3

Chroma

VAVA **$4,999**

Brash beams in true 4K

3 At the high end is the true 4K Vava Chroma. Not only has it got great gaming capability, it's also touting rich colours and resounding Harman Kardon speakers. The only real drawback is the price, though the Indiegogo price is 38% cheaper than its $4,999 RRP.

At 24.3 pounds (10kg) it's pretty hefty, but there's power behind the bulk. Thanks to the ultra-short-throw nature of the Vava Chroma it'll sit happily against the wall on your TV stand, too. You can mount it to the ceiling if you like, and there are even options to rotate the display as needed. Also, eight keystone points makes it very versatile. This one caps out at a 60Hz refresh rate, so although it's not the best for competitive gaming, the 16-20ms response time is still great for playing AAA games in up to 4K. That is if your GPU can handle it.

Of course, the wealth of premium features here comes at a premium price, but that's backed by a two-year warranty and 25,000 hours of lamp life. That's around 11 hours a day, every day, for six years.

PC PowerPlay VERDICT

- Ultra-short throw
- True 4K resolution
- A real bank-breaker

SPECS RESOLUTION: UP TO 4K / **LATENCY:** 16 MS / **REFRESH:** 60HZ / **WEIGHT:** 24.3 LBS (10 KG)

Elfin

XGIMI **$1,099**

Little yet lofty beams for less

4 The Xgimi Elfin is one of the smallest projectors on the list, making it super portable. And while there's no battery for untethered gaming, it's still easy enough to slip into a bag and take to a friend's house for a group gaming session. And the Elfin is no slouch in gaming mode, with a more than acceptable 26.5ms response time, although the 60Hz refresh does add a cap to how many fps you can appreciate. It's perhaps one for non-competitive online gaming, or a good old couch co-op session.

Adding to the portability of the Elfin, it features the incredible ability not only to automatically focus and correct the keystone position, but also to avoid obstacles on the projected surface such as photo frames or light switches – it makes the setup super speedy and straightforward for a quick movie or TV show.

Though there's no Netflix compatibility, and the sound system isn't the greatest, it's backed by a 30,000 hour lamp life – that's 10 hours a day, every day, for eight years.

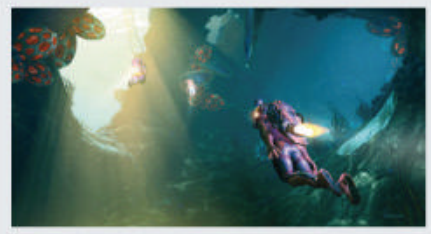
PC PowerPlay VERDICT

- Fantastic auto obstacle avoidance
- Gorgeous, compact design
- Noticeable dithering in dark areas

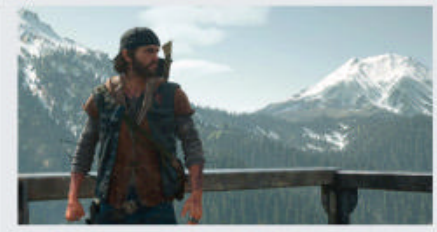
SPECS RESOLUTION: 1080P / **LATENCY:** 26.5 MS / **REFRESH:** 60HZ / **WEIGHT:** 2 LBS (900 G)

BLOCKBUSTER *Three games that are ripe for the big-screen experience*

RED DEAD REDEMPTION 2
Nothing beats living your own Western tale, hacking it through the vistas, and stopping to make a horse silhouette.



NO MAN'S SKY
Projecting *No Man's Sky* onto a large screen manages to further inflate the infinite expanse of space ahead.



DAYS GONE
Filling a wall with the Oregon hills is a satisfying experience, especially while ramming into Freakers on your bike.

4

Halo

XGIMI $1,499

One to make the picos cry

5 For a little more money than its sister, the Xgimi Elfin, the Xgimi Halo adds oodles more portability to the list of great features. It comes with a solid battery life that'll keep you going for a good three hours in standard mode, and it can even be used as a portable Bluetooth speaker. Oddly the Halo's shape is the only one we've seen that lends itself to ceiling-based projection (for gaming in bed). It does block the exhausts a little when you lie it down, but it's a cool option to have.

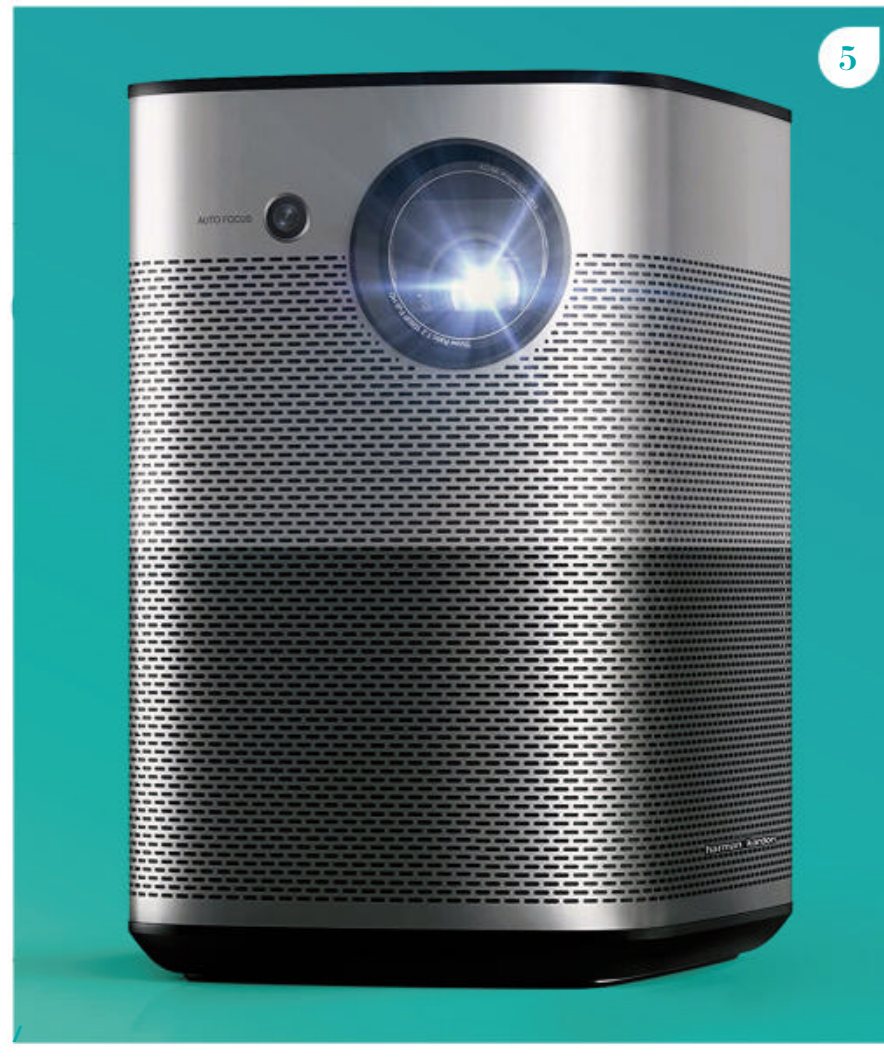
When it comes to gaming mode, you're looking at a higher latency than most on this list, but response time isn't everything. As long as you have it in gaming mode, it isn't excessively noticeable, but we wouldn't recommend it for fast paced, online gaming.

It's another smart Android device that boots up fast, and doesn't need to be yards from the wall in order to get a good-size screen going. It's worth noting it has to be square-on for gaming mode, as the keystone correction feature won't work in this mode.

PC PowerPlay VERDICT

- Supremely portable
- Excellent lamp life
- Not the best response time

SPECS RESOLUTION: 1080P / **LATENCY:** 40 MS / **REFRESH:** 60HZ / **WEIGHT:** 3.5 LBS (1.6 KG)



5

ADVERTORIAL

There are 245 LEDs on each earcup of the ROG Delta S AniMe headset.

INTRODUCING ASUS' ROG ANIMATE RANGE

GET STYLE WITH YOUR SUBSTANCE

It's amazing what a new keyboard can do. A significant PC upgrade might make your games look better and run faster, but a new keyboard makes the whole experience of using your computer more enjoyable – smoother, customisable switches, improved ergonomics, and improved aesthetics can fundamentally change the experience of gaming and working at your PC. Similarly, sometimes you don't know what sounds you're missing out on until you upgrade the cans around your ears. That FPS that you were struggling with is suddenly much easier when you can tell exactly where an enemy's footsteps are coming from or hear exactly how close the bullets whizzing past your ears are: a better headset can take you right into the action.

ASUS is at the forefront of improving the PC gaming experience through the Republic of Gamers (ROG) brand. The ROG Strix Flare II Animate Keyboard and the ROG Delta S Animate Headset have been designed with gamers in mind and aim to give you not only a competitive advantage, but also a smoother, more enjoyable, more immersive gameplay experience.

Both devices feature some very cool customisation options, thanks to ASUS' AniMe Matrix feature – that's where the "Animate" part of their names comes in. On the Animate Headset, each ear cup features 245 mini-LEDs that can host custom light displays, animations, or even live audio visualisations. This is perfect for showing off at a LAN, or if you just want a bit more flair when you're gaming, with multiple exciting pre-programmed display options showing off what you're listening to to anyone watching. The Strix Flare II keyboard features 312 mini-LEDs that also let you display animations, giving your keyboard a new level of personality. You can use them for system status indicators, to check brightness levels or RGB lighting modes, laptop battery life, time and date, mail notifications, and more. It's an extra level of pizzazz that makes these devices feel extra special.

The ROG Delta S Animate headset's microphone features AI noise-cancelling.

The **ROG Strix Flare II Animate Keyboard** and the **ROG Delta S Animate Headset** have been designed with gamers in mind and aim to give you not only a competitive advantage, but also a smoother, more enjoyable, more immersive gameplay experience.

WIRED FOR SOUND

The AniMe Matrix features are very cool, but they're also the tip of the iceberg. The ROG Delta S Animate Headset is a powerful, customisable headset that won't just enhance your

gameplay, but also your whole gaming setup: and despite weighing in at just 310 grams, it's packed with a ton of features. The attached microphone features ASUS' AI noise-cancelling, with a dedicated processor working hard to reduce over 500 million different types of background noise while preserving your voice. Your teammates won't hear background chatter, keyboard noise, or mouse clicks, letting you all focus on the game at hand.

This headset also features the incredible ESS 9281 Quad DAC for high-resolution audio. The device features four digital-to-analog converters for lossless audio processing, with each one targeting a different frequency band. This allows the headset to achieve an exceptional signal-to-noise (SNR) ratio, giving the sound greater precision. It achieves 130dB SNR, compared to the 90-100dB you'd expect from a regular DAC. This means that you'll get much more insight into directional audio and be better equipped to use sound knowledge to your advantage in competitive games. It also makes for a deeper, more immersive play experience, with the airtight chambers and ASUS' renowned ASUS Essence drivers delivering realistic soundscapes.

On top of that, the headset also features a Master Quality Authenticated (MQA) renderer, a built-in audio technology that can enhance audio quality even further when a piece of MQA audio is playing. All of these sounds are channelled through fast-cooling D-shaped cups, designed for comfort and style. Once you've experienced these amazing advancements in audio technology working together, it'll be hard to go back to gaming without all these features. The ROG Delta S Animate Headset isn't just for PC games, either – it's also compatible with Mac, PlayStation 5, mobile devices, and the Nintendo Switch, thanks to its USB-C and USB-A connectors. It's a versatile headset, and perfect for those who also like to game on the couch or on the go.

SWITCHED ON

The Flare II Animate Keyboard is a highly customisable mechanical keyboard that's designed to be ergonomic, and to give the user a huge degree of control. You can choose between ROG NX mechanical switches or Cherry MX switches, but you're not tied to them – this keyboard features swappable switches, so you can mix and match or find what's right for you.

Regardless of your switches, you'll be able to enjoy PBT doubleshot keycaps – they feature a mid-height profile and shorter stems than many keyboards, which leads to a reduction in key-wobble and lets you use your keyboard with precision and confidence in high-pressure situations. If you prefer longer keys, the ROG switch stabiliser will ensure smooth keystrokes, too.

This is a keyboard built with the serious user in mind. An 8,000Hz polling rate means that the response time on the keys is 0.125ms – essentially instantaneous, and around 8x faster than many other premium keyboards on the market. Not only is it super accurate, it's also likely to be quieter and more comfortable than your old mechanical keyboard, thanks to its internal sound-dampening foam for improved acoustics, and the included wrist rest, which glows when connected thanks to its light diffuser. This keyboard also features dedicated media and volume controls in the top left corner for easier playback, as well as a USB passthrough port that makes it easier to connect to other devices. It supports Aura Sync lighting for dynamic effects, and packs onboard memory that allows you to save and switch between six custom profiles. It's a keyboard that changes to suit your needs, whatever they may be.

Swappable switches let you customise the Flare II Animate keyboard on a per-key basis.

You can choose between either Asus' own ROG NX switches, or Cherry MX switches.

Thanks to the AniMe Matrix feature, the ROG Strix Flare II Animate Keyboard and the ROG Delta S Animate Headset are some of the coolest PC peripherals on the market. But there's much more to them than their showiest feature – these are incredibly versatile, powerful tools for better gaming, and are a perfect upgrade for your PC setup.

GROUP TEST

INTEL 600-SERIES MOTHERBOARDS FOR 12TH GEN CPUS

A host of options to get the best out of your PC.

By Jacob Ridley, Chris Szewczyk

Intel's 12th Gen processors are stuffed with loads of new features, but they're also fit to burst last generation's motherboards, courtesy of their larger footprint. That means you need a new 600-series motherboard to put Alder Lake to use in your gaming PC, and we've tested the latest and greatest to help you narrow down your search.

You have a few motherboard chipsets to choose from: Z690, H670, H610, and B660. The most fully-featured of the lot are the Z690s, though they're also likely to be the most expensive. If you find they're out of your budget, you may want to look towards more gaming-focused B660 boards. These offer a tighter specification but maintain PCIe 4.0 support from the chipset, which means you can still utilise fast PCIe 4.0 NVMe SSDs to their fullest in your machine.

1

Z690 Aorus Pro

GIGABYTE $499

An actually affordable high-end Z690

1 By 2010's standards, the Gigabyte Z690 Aorus Pro would be positively pricey. In 2022, however, it's practically mid-range. The Z690 chipset has ushered in some of the priciest motherboard's known to man, but not the Aorus Pro. No, this motherboard is actually a little less than you might expect, and still manages to deliver a well-rounded feature set.

If you're planning a Core i9 12900K build, the one thing you need to know is whether your motherboard is going to be capable of running it without issue. The Aorus Pro absolutely is. It comes with a stacked 16+3 phase VRM with 90A stages that is more than enough to power Intel's top chip, even if you're overclocking. Though it's also important to find adequate USB ports on the rear I/O. The Aorus Pro has you covered there, with 13 USB ports in total. If you're in the market for a high-end board, there's a lot on offer with the Aorus Pro at a good price.

PC PowerPlay VERDICT

- → **Solid power delivery**
- → **Four M.2 slots**
- → **13 I/O USB ports**

SPECS SOCKET: INTEL LGA 1700 / **FORM FACTOR:** ATX / **MEMORY SUPPORT:** UP TO DDR5-6200(OC) / **STORAGE:** 4X M.2; 6X SATA / **USB:** UP TO 2X USB 3.2 GEN2X2, 4X USB 3.2 GEN 2, 6X USB 3.1 GEN 1, 8X USB 2.0 / **DISPLAY:** 1X DP 1.4 / **NETWORKING:** INTEL WI-FI 6; INTEL I225V 2.5G LAN / **AUDIO:** REALTEK ALC4080 7.1 CHANNEL HD AUDIO

Z690 Taichi

ASROCK $899

Bragging rights included in the box

2 The ASRock Z690 Taichi is teetering on the edge of extreme. There are some truly mind-bogglingly expensive Z690 motherboards out there, and the Taichi isn't far off being one of them. It's a flashy board for someone with more money than components to spend it on, but it is at least worth considering. There's a slimmer selection of USB ports on the Taichi than on the Gigabyte Aorus Pro, though there's some serious bandwidth on offer with the twin Thunderbolt 4 ports. One Thunderbolt USB hub and you're sorted for USB ports for your PC's lifetime, though that would be asking for more money to burn. The Taichi delivers in other ways, though. It comes with a 20-phase, 105A-stage VRM, which is truly overkill for whatever processor you load into the Taichi. Then you have the slight performance lead in benchmarking, if only by a hair. Lastly, it looks fantastic, and that has to count for something if you're spending this much money.

PC PowerPlay VERDICT

- → **Dual Thunderbolt 4 Type-C ports**
- → **Mega VRM**
- → **Good networking capabilities**

SPECS SOCKET: INTEL LGA 1700 / **FORM FACTOR:** ATX / **STORAGE:** 3X M.2; 6X SATA / **USB:** 2X / **THUNDERBOLT** 4 TYPE-C; UP TO 1X USB 3.2 GEN2X2, 2X USB 3.2 GEN 2, 9X USB 3.1 GEN 1, 3X USB 2.0 / **VIDEO OUT:** 1X HDMI / **NETWORKING:** KILLER WI-FI 6E; KILLER E3100G 2.5G AND INTEL I219V 1G LAN / **AUDIO:** REALTEK ALC1220 7.1 CHANNEL HD AUDIO

THE MSI COMES WITH SERIOUS POWER DELIVERY

MPG Z690 Carbon WIFI

MSI **$629**

On the edge of expensive

3 An MSI Carbon motherboard is never a bad bet. Each one I've used has been built to a high standard and comes with a competitive set of features. Much like the other Z690 motherboards we've tested, the MSI comes with serious power delivery. The Carbon's VRM is made up of 18+2 phase design with 75A stages. That's not as powerful in raw current as the 105A boards, but those really are overkill for most gamers. Simply put: the MSI won't run into issue with any 12th Gen chip. MSI has also fitted 10 USB ports to the rear I/O of the Carbon, which is a little slimmer than some, but makes up for it with plenty of capacity for speedy SSDs thanks to five M.2 NVMe slots.

The MSI MPG Z690 Gaming Carbon is a solid Z690 motherboard, but that's at its launch price. If it trends downwards in price over the next few months relative to its competitors, it might begin to really stand out.

PC PowerPlay VERDICT

- Five M.2 slots available
- Decent value, relatively speaking
- Solid VRM configuration

SPECS SOCKET: INTEL LGA 1700 / **FORM FACTOR:** ATX / **STORAGE:** 5X M.2; 6X SATA / **USB:** UP TO 1X USB 3.2 GEN2X2, 6X USB 3.2 GEN 2, 2X USB 3.1 GEN 1, 8X USB 2.0 / **VIDEO OUT:** 1X HDMI 2.1, 1X DP 1.4 / **NETWORKING:** INTEL WI-FI 6E; INTEL I225V 2.5G LAN / **AUDIO:** REALTEK ALC4080 7.1 CHANNEL HD AUDIO

ROG Maximus Z690 Apex

ASUS **$1,199**

Professional overclockers only

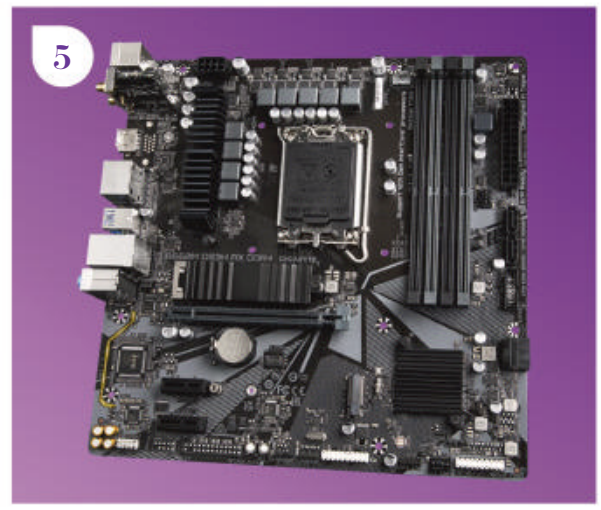
4 Most of us will glance at the Asus ROG Maximum Z690 Apex's price tag and then immediately elsewhere. It's understandable, as it is one of the most expensive motherboards we've ever tested. It's also one of the most well-made, though what more makes it worth that gargantuan pile of cash is up for debate.

Asus has fitted the Apex Z690 with a 24+2 VRAM with 105A stages, which puts it at the cutting-edge of VRM design. You can safely overclock any 12th Gen chip to its limit, though you'd probably be doing yourself a disservice by not running an Intel Core i9 12900K. Since this motherboard is tailored to overclocking, it only comes with two DDR5 DIMM slots. Though the more gaming-focused user may find solace in its ability to fit up to five NVMe SSDs, through the use of the included PCIe 5.0 add-in card. That said, there's not a great deal in this board for gamers, and that makes it terribly difficult to recommend.

PC PowerPlay VERDICT

- Bulletproof build quality and VRM
- PCIe 5.0 M.2 card included
- Overkill for the vast majority of users

SPECS SOCKET: INTEL LGA 1700 / **FORM FACTOR:** ATX / **STORAGE:** 5X M.2; 6X SATA / **USB:** UP TO 2X USB 3.2 GEN2X2, 5X USB 3.2 GEN 2, 8X USB 3.1 GEN 1, 4X USB 2.0 / **NETWORKING:** INTEL WI-FI 6E; INTEL I225V 2.5G LAN / **AUDIO:** REALTEK ALC4080 7.1 CHANNEL HD AUDIO



IS WI-FI 6E WORTH IT FOR GAMERS?

Wi-Fi 6E is the latest wireless technology on PC. It takes the benefits of WiFi 6, which include higher data rates, capacity, multi-device performance, and power efficiency; and adds support for the 6GHz frequency. That extends opens up whole new channels for high-speed communication for your PC and games.

So in a way, yes, Wi-Fi 6E is immediately worth it for gamers. That's especially true if you're in a congested networking area where a whole other frequency could work wonders for connection speed and stability. The good news is that Intel is integrating Wi-Fi 6E support directly into its 12th Gen platform, though there are a few catches if you want to make the most of Wi-Fi 6E.

For starters, Intel including Wi-Fi 6E support doesn't mean you'll find Wi-Fi 6E on every compatible motherboard. You will also need to ensure your router is also compatible with Wi-Fi 6E to use it, so think about your entire wireless ecosystem before you let Wi-Fi 6E support influence your decision.

Gaming tests are run at 1080p at medium to high settings to remove any bottlenecks caused by graphics card performance. When relevant, both single- and dual-graphics card configurations are tested to ensure motherboard stability in SLI and Crossfire situations.

B660M Mortar WiFi DDR4

MSI **$289**

Affordable board with high-end performance

5 There are Z690 motherboards around the $300 mark, but they are few and far between and pretty damned sparse in terms of features. But this MSI B660M – the M stands for Micro ATX because it's a little mobo – is able to deliver the same stock performance from a top-end Core i9 12900K CPU and comes with a healthy feature set, too.

It's a DDR4 board as well, which means you don't have to spend big on the unreasonably pricey and hard-to-find DDR5 modules. Just grab a low latency DDR4 kit at 3,200MHz or above and you'll be laughing. You also get Wi-Fi 6, so you get the wireless speed without the premium price of the only slightly quicker Wi-Fi 6E. This board is capable of keeping up with a Core i9 chip which means i5 CPUs are going to be a perfect match. There's no overclocking here, so you're not going to be getting 5GHz+ out of your Core i5 12400, but it will be a great platform for an affordable new gaming rig.

PC PowerPlay VERDICT

- → **Can tame a stock i9 12900K**
- → **Cheap DDR4 support**
- → **Decent USB complement**

SPECS SOCKET: INTEL LGA 1700 / **FORM FACTOR:** MICRO ATX / **STORAGE:** 2X M.2; 6X SATA / **USB:** UP TO 2X USB 3.2 GEN2 TYPE-C; 3X USB 3.2 GEN2; 2X USB 3.2 GEN1; UP TO 8X USB 2.0 / **VIDEO OUT:** 1X HDMI 2.1; 1X DP 1.4 / **NETWORKING:** INTEL WI-FI 6; REALTEK 2.5G LAN / **AUDIO:** REALTEK ALC1200 7.1 CHANNEL HD AUDIO

B660M DS3H AX DDR4

GIGABYTE **$239**

Real basic board for the low end

6 There are always limits when it comes to budget boards, and more so with cheaper versions of a budget chipset. But, while the Gigabyte board is most definitely basic, it has at least tried to ensure the necessary features are present and correct. The mATX form factor means this wee board doesn't have space for more PCIe slots, and you only get two M.2 ports for SSDs, but that's OK in a mainstream gaming PC.

You also get Intel's Wi-Fi 6 wireless tech, which is plenty fast, along with a pretty standard 2.5Gbps LAN connection. More of a concern is the paucity of USB ports on the back panel, and even in the internal headers. That and the ultra basic BIOS menu, which I found a nightmare to access.

Though this is not a board you can pair with an i9 for serious multi-threading tasks – its VRMs don't have the goods to give it the juice needed for long term performance – for games, it's not an issue, and will happily keep your GPU fed no matter what it is.

PC PowerPlay VERDICT

- → **Affordable price**
- → **DDR4 support**
- → **Limited USB**

SPECS SOCKET: INTEL LGA 1700 / **FORM FACTOR:** MICRO ATX / **STORAGE:** 2X M.2; 4X SATA / **USB:** 1X USB 3.2 GEN2 TYPE-C; 5X USB 3.2 GEN1 TYPE-A, 6X USB 2.0 TYPE A / **VIDEO OUT:** 1X HDMI, 2X DP 1.4 / **NETWORKING:** INTEL WI-FI 6; REALTEK 2.5G LAN / **AUDIO:** REALTEK 7.1 CHANNEL HD AUDIO

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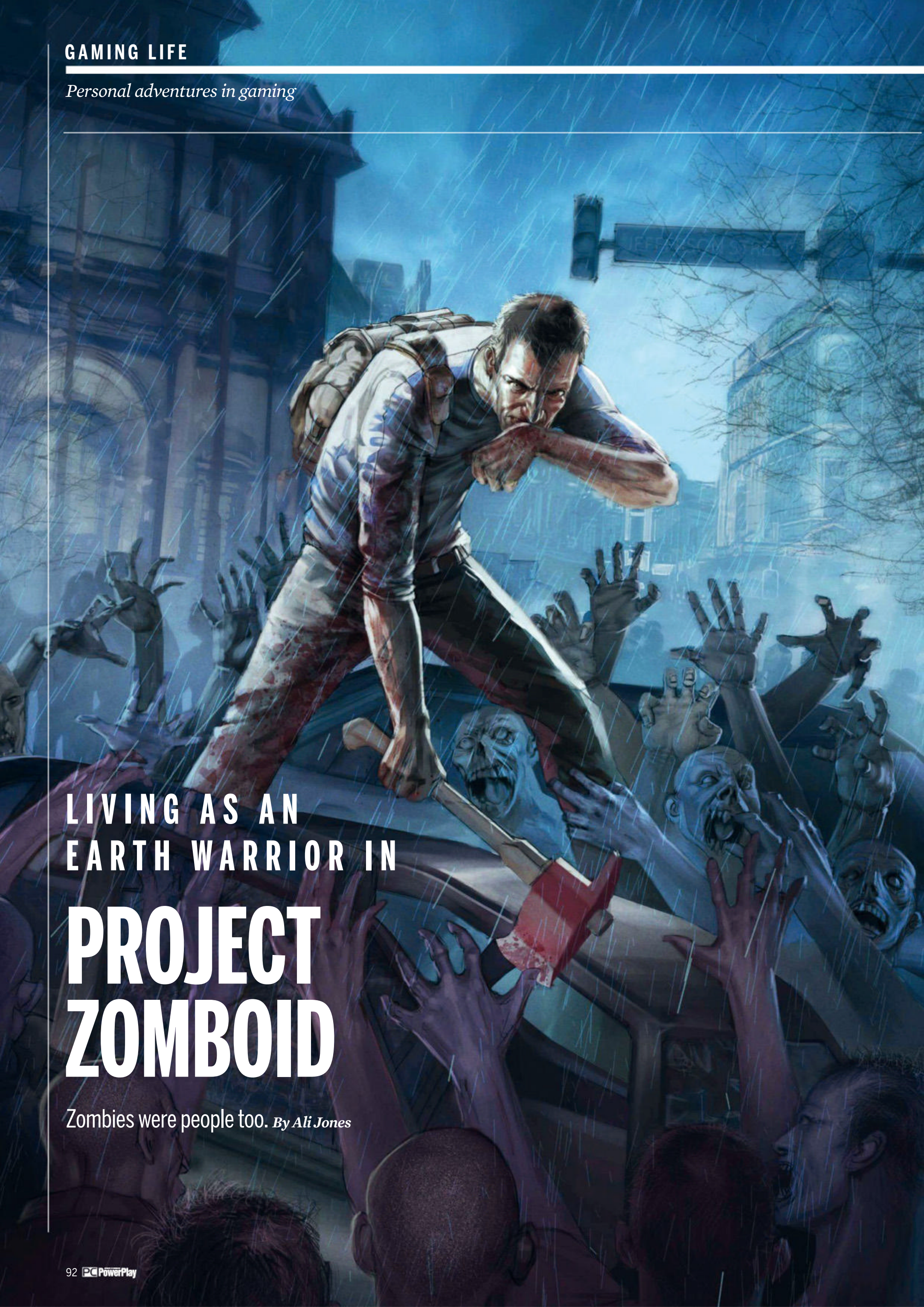


LIVING AS AN EARTH WARRIOR IN PROJECT ZOMBOID

Zombies were people too. ***By Ali Jones***

Every time *Project Zomboid* loads up, it tells you, with grim certainty, that this is a game about how you died. For most, that death will likely come at the hands of one of the thousands of zombies shambling across its version of Kentucky. For others, it might be starvation or illness – once all that canned food has run out, how long will it be until you take a gamble on a mushroom or an uncooked rat?

But what if it didn't have to be that way? What if you could not only survive, but thrive, forsaking the leftovers of the families lost to the apocalypse and growing your own food in its place? What if the undead simply need to be left to their own devices, to live and let (un)live? If nothing else, the apocalypse offers a chance to start over, and to help the world be cleansed of the mess that humanity has made of it.

To take the best possible advantage of this fresh start, I create a character capable of living up to my new ideals. The result, Leaf, comes with a proficiency in farming and foraging to help him live off the fat of the land. To make up for the positive traits I've taken, I have to choose some negatives too; I cheat slightly, taking the Pacifist trait which makes me weaker in combat, and the Sunday Driver trait, which makes me drive very slowly, and which might prove tricky if I ever planned to get in a car or fight a zombie. I round things out with Claustrophobia, which makes me nervous if I go inside. Since I'm planning a life in the great outdoors, however, I don't see that being a problem.

Leaf starts life in the well-to-do town of Riverside. Things get off to a good start as I find an entire eggplant in the fridge, but get worse very quickly, as my claustrophobia is much more serious than I imagined. Within seconds I am a quivering wreck. I grab a jar of peanut butter to calm me down and aim to get out of town as quickly as possible. In doing so I get my first meeting with the undead, passing a zombie-ridden farm shop that might have been perfect for my clean-eating lifestyle if I didn't have to fight my way to the front door.

Leaving Riverside, I eventually make it to the countryside. It's not long until I spot a farmhouse. It's a perfect spot – surrounded by woodland on three sides, with plenty of space for farming, and even a barn to store tools. Inside, there's plenty of room, and even some food still in the freezer. Unfortunately, I am still too nervous to remain indoors for any length of time, so I forgo the beds upstairs and instead spend my first night on the concrete floor of the open barn.

WILD CAMPING

I wake up feeling more tired than when I went to sleep, but I have lots of work to do. As the morning progresses I dig some furrows in the field, but soon remember that I don't have any seeds to plant in them. I set off in search, but quickly become so tired that I need to take a nap in the woods. By the time I wake up again, it's very dark and I'm utterly lost.

BY THE TIME I WAKE UP AGAIN, IT'S VERY DARK AND I'M UTTERLY LOST

This proves to be the start of a vicious downward spiral. If I'm lucky enough to find a house, I dash inside as quickly as I can, grab any food I can eat, and make a run for it. More often than not, I'm trailing a string of zombies behind me. My lack of sleep means that I'm usually forced to pass out for a power nap under a secluded bush, meaning I wake up even more exhausted than before. Being tired dulls my senses, and an opportunistic zombie soon attempts to take a chunk out of me.

It doesn't get its teeth in, but it does give me a nasty scratch. I bandage it up as best I can, but whether it's the blood loss, the lack of sleep, or a nascent zombie virus, my condition worsens. Soon, I can barely walk. A poorly thought-out attempt to hop a fence fails, and Leaf is torn apart by the zombies on his heels.

A NEW LEAF

Thankfully, *Project Zomboid* lets you continue your progress, albeit with a new character. Leaf's freshly-created son, Branch, appears fully-formed in a bar on the far side of town. Branch shares his father's eco-friendly lifestyle, but I've done away with his claustrophobia. I leave the bar, taking a few beers with me – alcohol is definitely a natural product – and dash inside a nearby grocery store. Expecting to leave carrying a king's bounty, I'm instead met by shelves of rotting produce. Anything not in a fridge has gone off, meaning my need for seeds has grown. Branch is in luck, however, as the next shop is filled with useful supplies. Not food, this time, but clothes, tools, and, most importantly, seeds. I leave with bulging pockets.

The journey home isn't easy, but I eventually make it back to the farm. Branch is exhausted, but has unfortunately attracted the attention of a few zombies, who have followed him to the homestead. Were it not for my new lifestyle, I'd have dispatched

THE RULES

1. I can't use gas-guzzling cars
2. No meat, no dairy, and no canned food
3. No killing – zombies were people too

The all-seeing eye of the foraging system is a frequent companion.

them one-by-one with the aid of the shovel I grabbed from the store, but that's not an option now. Despite my exhaustion, I'm forced to lead them away from the house before doubling back on myself and sneaking back to bed.

The next few days pass in a blur of productivity. More furrows are dug. Seeds are sown, watered, and heaped with fertiliser. Furniture is disassembled and turned into barricades for unused doors and windows. But even with my home protected and my future food in the ground, it'll take two weeks for my first crop to come in. With each crucial trip back to Riverside for more food, I return to find that something else has gone wrong; during one trip, the water is cut off; during another, the electricity goes, removing my ability to cook or refrigerate food. Now, even when my crops come in, I'll have no way to keep them from rotting. With every journey, the cupboards full of canned goods become increasingly appealing.

As it turned out, however, Branch wouldn't be tempted for long. After one successful trip, in which I find more seeds and extra fertiliser, I take a hubristic gamble on a couple of foraged field mushrooms. Heading to sleep with a pleasantly full stomach, my condition deteriorates rapidly. I woke up just in time to expire – with an unlikely spray of blood – on the floor of my bedroom.

(WOOD)CHIP OFF THE OLD BLOCK

So it was that Leaf's grandson, Log, came to be. Spawning even further away from the family home than Branch did, it takes almost a full day to get there, by which time I'm hungry, thirsty, and tired. Before I can attend to my needs, however, I must lay my father to rest. I take everything but his underwear off his corpse, and bury him in the chicken run.

I wake up the next morning to rain. The torrential downpour drenches the soil, sating my thirsty plants. I jump into action, digging new furrows so that Log can sow the seeds that Branch discovered on his final expedition. Carrots and potatoes join my broccoli and impressive cabbage crop. I place all the receptacles I can find outside, littering the ground with buckets, cooking pans – even a lone mug – to retain as much water as possible. During the downpour, I notice my first crop has come in – I pull ten cabbages from the ground, and immediately begin feasting on them.

ZOMB-ME

An apocalyptic earth warrior's most important personality traits

PACIFIST
Having sworn off violence against zombies, a trait that limits your effectiveness with weaponry is a good way to earn bonuses.

INCONSPICUOUS
If one false move can lead to an hours-long pursuit by a tenacious zombie, it pays to try and keep a low profile.

CLAUSTROPHOBIC
You should be so keen to sleep under the stars that the thought of getting into a real bed should bring them out in a sweat.

HIKER
A life on the trail helps make sure you can find some tasty food to eat wherever you are.

GARDENER
Some extra farming stats are crucial when you're trying to maximise cabbage production.

SUNDAY DRIVER
I never even touched a car, and this offered me a free skill point if I swore to drive safe.

To keep them fresh, my best option is to cook them. I make a campfire out of the remains of the furniture I took apart, but to light it I need a spark. I'm most likely to find matches or a lighter in Riverside, so with the rain cleared and my pockets full of cabbage, I head out.

My decision not to kill zombies has always made these trips a little more dangerous, but up until now I've been able to stay safe (Leaf's misfortune notwithstanding). A closed door is usually enough to hold back even a pretty impressive crowd of the undead long enough for me to dash inside, collect some food and make a break for it before trying again at the next place. Now that I need specific items, however, I need to search the entire house rather than simply raiding the kitchen. It's soon clear that with zombies pounding on every door, there's no time to perform a thorough sweep of Riverside, so I give up and head off in another direction, hoping for somewhere a little more peaceful.

VEGETABLENNUI

It's a poor strategy. Any 'fresh' food I find is now rotten, and the few farmhouses I uncover are empty of any alternatives. I spend a night echoing Leaf, sleeping on the wooden floor of a run-down outbuilding. I discover a generator, which would have been the best way of keeping my crops fresh were it not just as reliant on petrol as the cars I've sworn not to use, or if I knew enough about electricity to plug it into my house. I stay alive, mostly thanks to the cabbages that I collected before I left, but those are making Log very unhappy, so it's a mixed blessing when I return home – largely empty-handed – to find half my crop has rotted in the ground, but the other half has borne dozens more seeds.

It's clear I have enough cruciferous vegetables to keep me alive for a long time, but it's around this point where I start to wonder

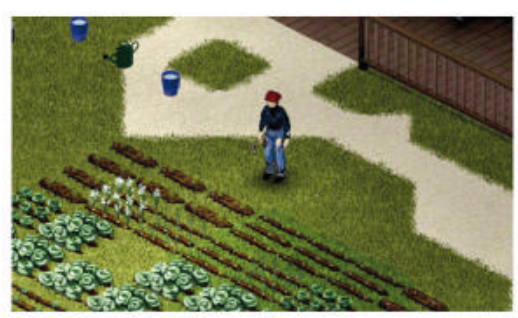
This is roughly where my cabbage-related excitement peaked.

As death-traps go, this feels extra cruel.

I STAY ALIVE, MOSTLY THANKS TO THE CABBAGES THAT I COLLECTED BEFORE I LEFT

whether this life is even worth living. If I step away from my homestead, I spend half my time foraging for mushrooms that might kill me or insects that my moral code forbids me from eating. The other half is spent acting like some grim Pied Piper, leading a trail of zombies back and forth across fields or down side streets, just so I can try and loot some forgotten shed. If I stay at home to tend to my crops – which I remain somewhat proud of – I'll be forced to plant ever-expanding fields of cabbage, a foodstuff which I can barely consume as quickly as I am now growing it, and which Log has come to hate so much that the game tells me it's making him suicidal.

If I'm not scoffing down raw vegetables, I'm dismantling my house from the inside until I'm tired enough to crawl into the only surviving piece of furniture, only to awake the next morning to a hearty breakfast of another whole cabbage. The cycle will continue until I'm mauled by an opportunistic undead, I accidentally gnaw on some poisonous plant matter, or most likely, I run out of drinking water and succumb to a waterborne parasite from drinking untreated river water. *Project Zomboid* makes it clear that there's no real way to survive this particular apocalypse, but what it didn't make so clear was that Log would have died long before his heart stopped beating. ■

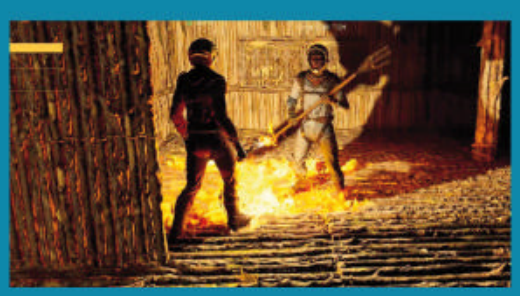


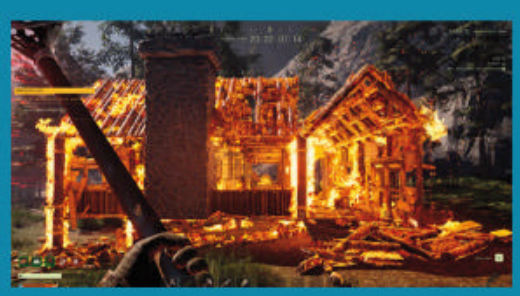
FAR LEFT: Leaf's greatest enemy – the wrought-iron fence.

LEFT: Trails like this would become very familiar.

ICARUS' BEAUTIFULLY DESTRUCTIVE FIRES

A bright spot of chaos in my crafty travels. ***By Lauren Morton***





LEFT: The fire whacker won't save this one.

After a tense night hunting wolves in the pitch dark forests of *Icarus*, a friend and I trek back to our small but sturdy wooden cabin. The dull orange glow of our campfire in the distance is our target, growing steadily larger as we get closer. It grows too large. That's not a campfire. "Is that our home base?" my friend asks. "Our home base is on fire!" We sprint there, finding our third friend casually chopping trees not even 50 feet away, totally unaware of the conflagration behind him. We do our best to smack the flames off the walls with the fire whackers we'd crafted. In the end, it's too late. Flames spread to every one of the walls we've built, and our wooden base burns to the ground. Again.

My favourite part of exploring a new survival game is finding out just how reactive its world is. *Icarus* has dangerous wildlife, the constant threat of starvation, oxygen deprivation, and more, but what brings me the most joy is the ever present threat of accidental arson.

The first clue that fire would be my group's main nemesis in *Icarus* came on our very first night. With no bedrolls to sleep in, we took our newly crafted axes into the forest to cut trees by torchlight. Without the ability to dual-wield tools, we chucked our torches on the ground while we chopped. That's when we found out that standing on top of a torch would set us on fire – and that running for the nearest body of water would put us out.

After collecting wood all night and building our first tiny, thatch shack the following day, we spent our second night huddled inside our home. Without bedrolls to pass the night in, we spent the dark hours goofing around inside our little hut. We huddled in its corners, squeezed between our first wooden chest and a tiny oxidiser. We found out, as our tiny home turned to cinders at our feet, that holding a torch too close to a thatch wall also starts a fire.

We diligently made every single fire-related mistake at least once. We built a floor torch too close to an interior wall, which nearly cost us another base. We gestured at one another with torches in hand, catching one another on fire and sprinting in a circle around the inside of another base, tracking fire behind us with every footstep. We built a campfire inside the floor, somehow.

When initially perusing *Icarus*' tech tree, we spotted the rake-looking device called a fire whacker. We laughed, believing it to be a frivolous specialty tool. After our third encounter with fire, we maintained a strict one fire whacker per prospector policy. Just in case.

BLAZING SQUAD

All that property damage might have been more discouraging if I weren't playing online with three friends all willing to laugh over every unlikely mistake we've made – and if *Icarus*' fires weren't so beautiful.

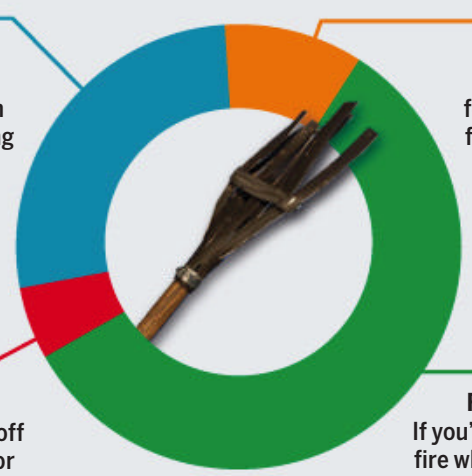
They start small. A single torch placed too close to a wooden structure will kick things off. One section of floor or wall begins with a small flame on its surface, eventually turning glowing orange, pulsing like the last charcoal in a campfire. Fire spreads to adjacent building pieces, floors to walls to support beams until an entire structure is ablaze and glowing. Beams creak and crack, falling to the ground in flaming piles. It's a horrifying mess to be in the middle of – desperately slapping the floor with my fire whacker and knowing that I'm fighting a losing battle as my stamina is depleted while the fire keeps spreading. *Icarus* is an undeniably lovely-looking survival game, and its devastating fires might be its most beautiful.

Icarus doesn't contain itself to house fires. Lightning can be the catalyst too, striking forested areas and kicking off a chained conflagration even more frightening than a cabin fire. Trees catch their neighbours on fire, and the spread is a thing of awe. I've watched them from the safety of a cliff above, standing in the drizzle at the end of a storm while a fire rages on for hours.

Rarely do I get so much enjoyment out of something that routinely ruins my day, but *Icarus*' fires are an exception – whether by self-inflicted arson or punishment from Mother Nature. They're just the right amount of chaos in a genre all about control. ■

GET WHACKIN'

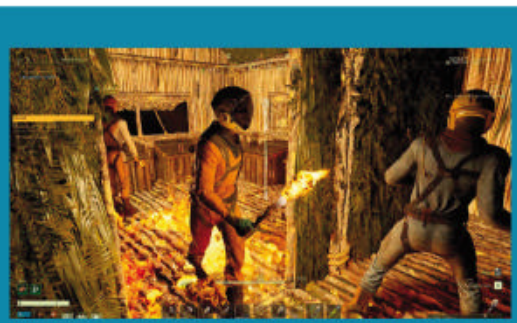
Fire whacker crafting guide


27%
Fiber (10)
Ever important in early crafting recipes, found by harvesting small bushes.
11%
Sticks (4)
Also easily foraged from forest brush.
5%
Stones (2)
Snag these off the ground or with a pickaxe.
57%
Forethought
If you're crafting a fire whacker while inside a burning house I have bad news for you.

WE DILIGENTLY MADE EVERY SINGLE FIRE-RELATED MISTAKE AT LEAST ONCE

NEED TO KNOW

RELEASE December 3, 2021	**DEVELOPER** RocketWerkz
PUBLISHER In-house	**LINK** surviveicarus.com



LEFT: The arson was coming from inside the house.

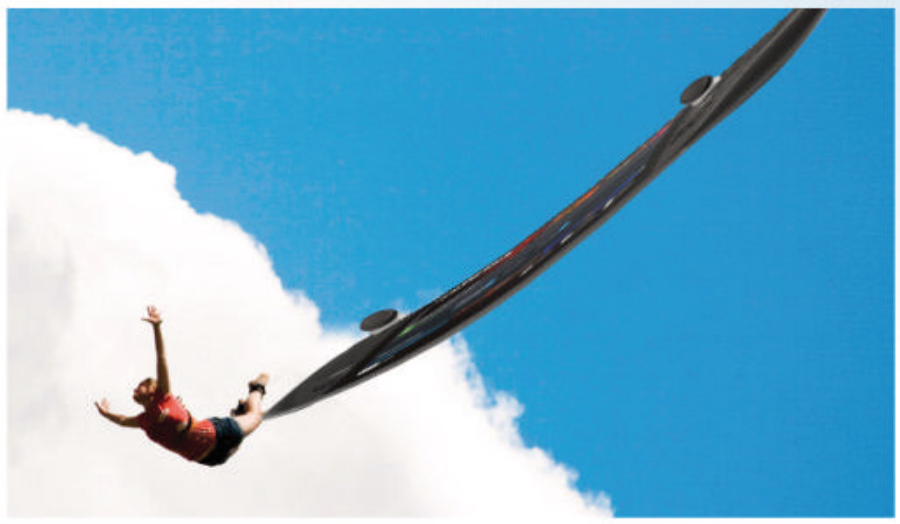
It's all over...

What's next for the Deck?

The Steam Deck is cool and all, but you know what would make it even cooler? Accessories! Check out our great ideas

Wheels

Turn your Steam Deck into a skateboard deck and make yourself more portable than ever! May void the warranty.



Bungee Cord

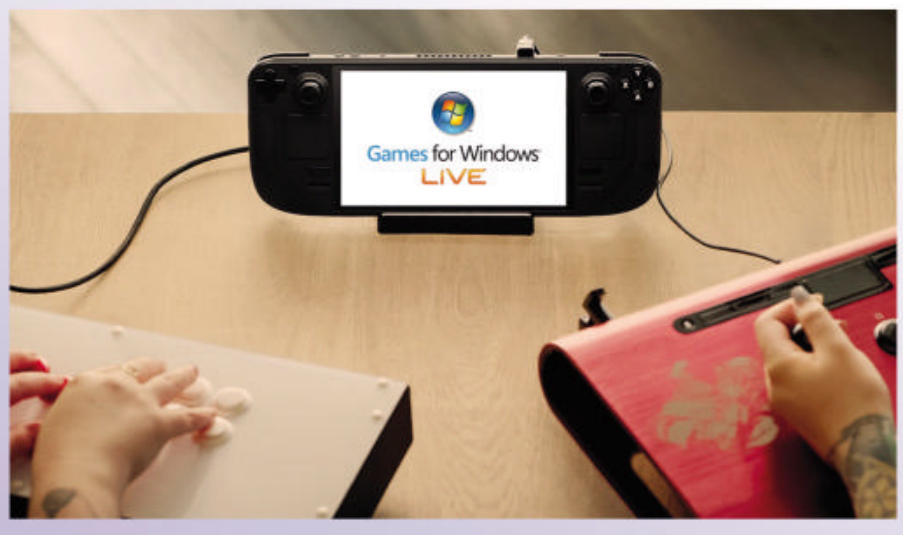
Perfect for *Elden Ring* players – every time you throw your Deck at the wall, it'll bounce back to your hand!

Hats

Honestly, how long is Valve going to be able to resist selling headgear for their hardware?

Portable Crowbar

A miniature tool that snaps onto your Deck! Perfect for prying open tiny crates, or killing ant-sized Antlions.



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Relive the magic of Microsoft's lost gaming platform! Come on Gabe, you know you loved it.

VR Conversion Kit

Strap the Steam Deck to your face for a cheap alternative to a VR headset! The perfect way to play *Half-Life: Alyx*.

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